

(No Model.)

W. L. FAY.  
RECOIL SPRING FOR BABY CARRIAGES.

No. 410,583.

Patented Sept. 10, 1889.

FIG. I.

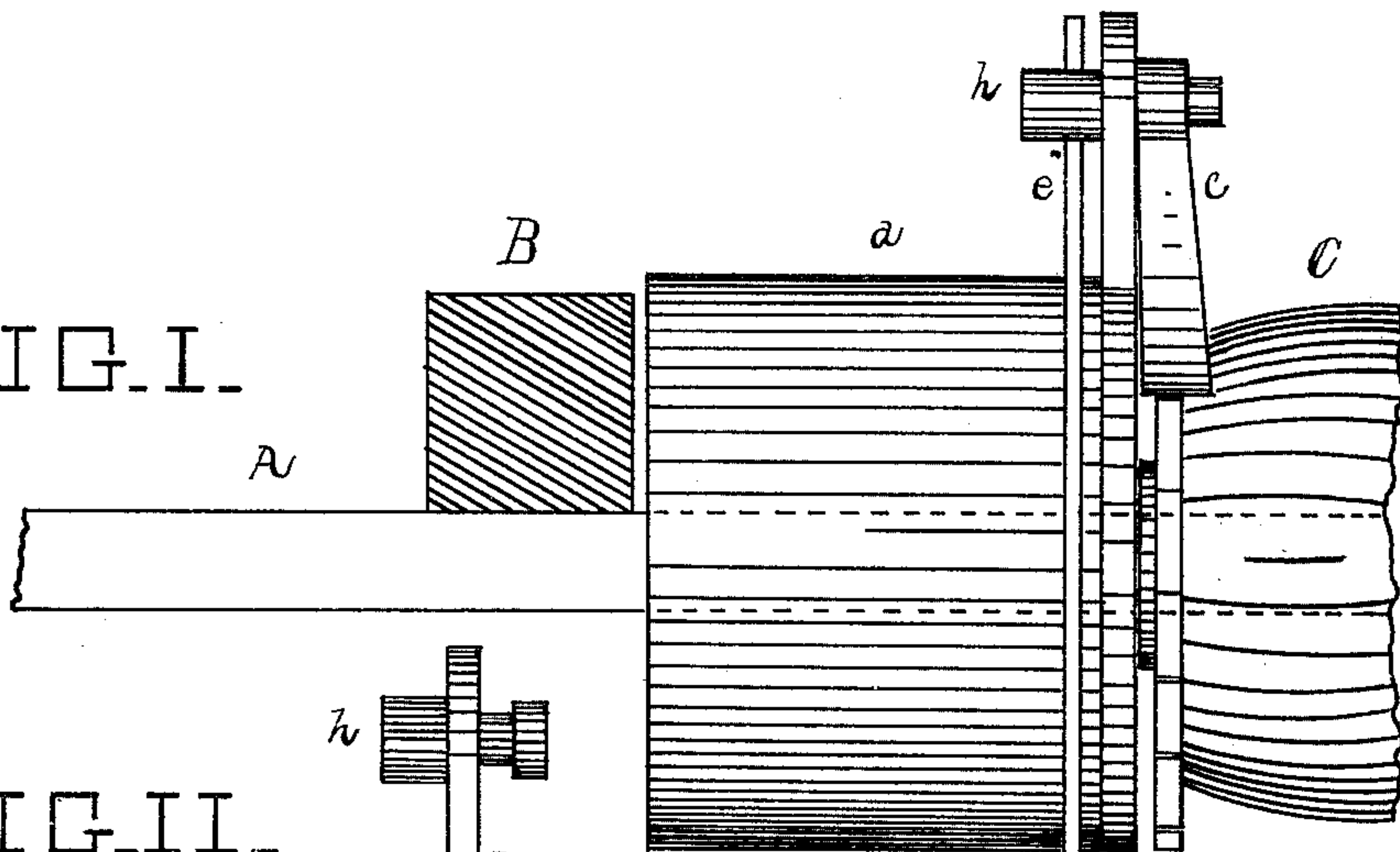


FIG. II.

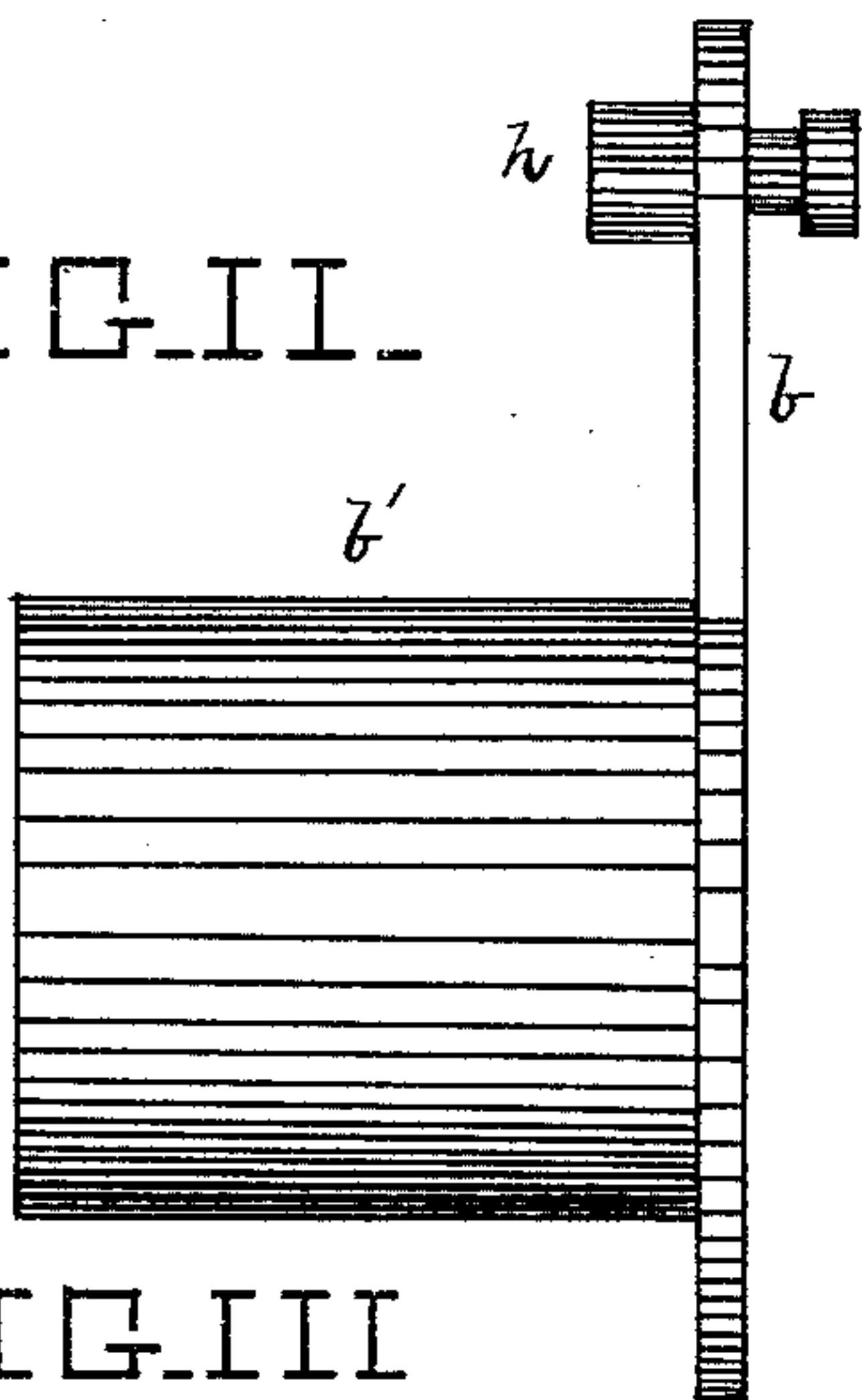


FIG. III.

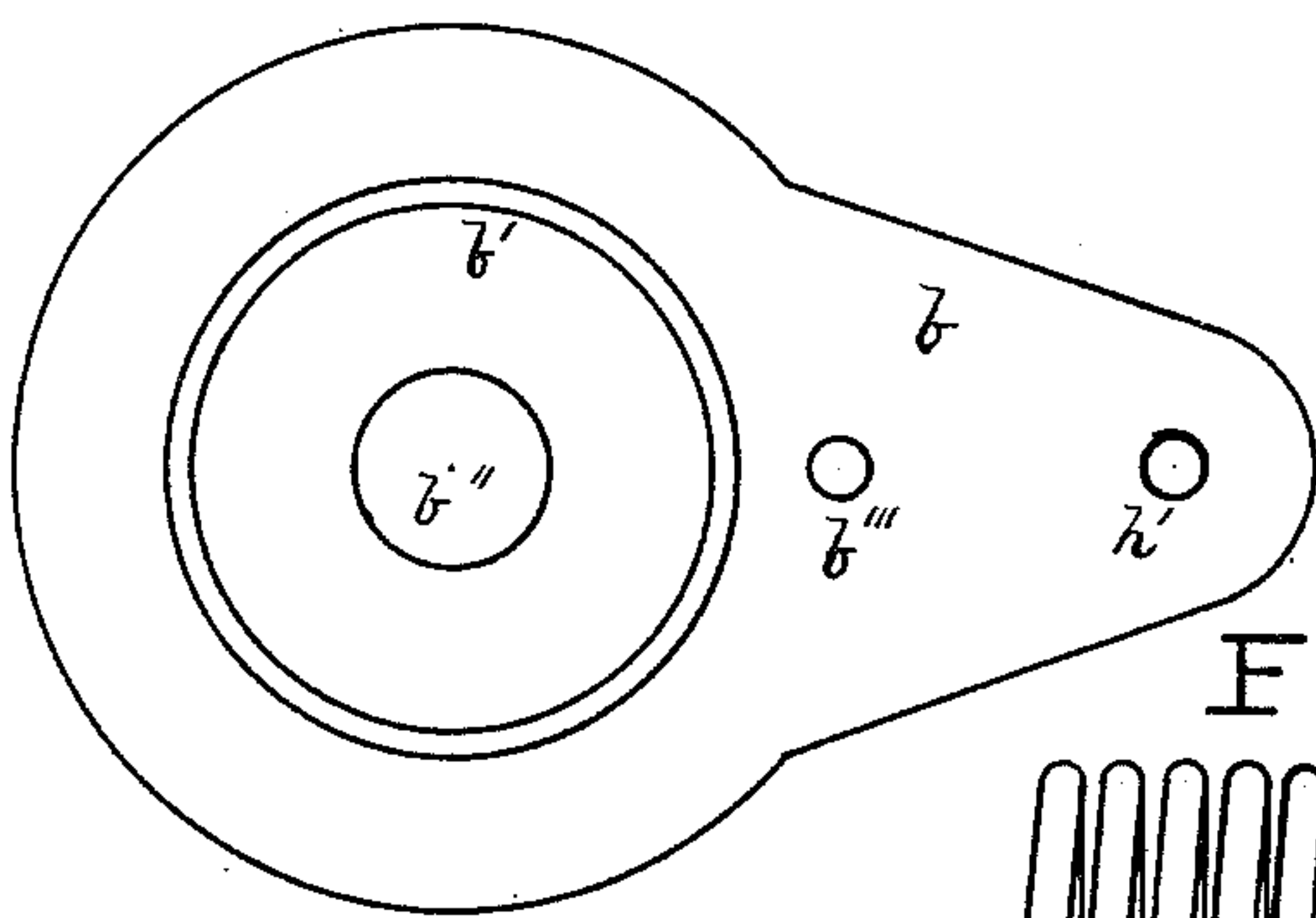


FIG. IV.

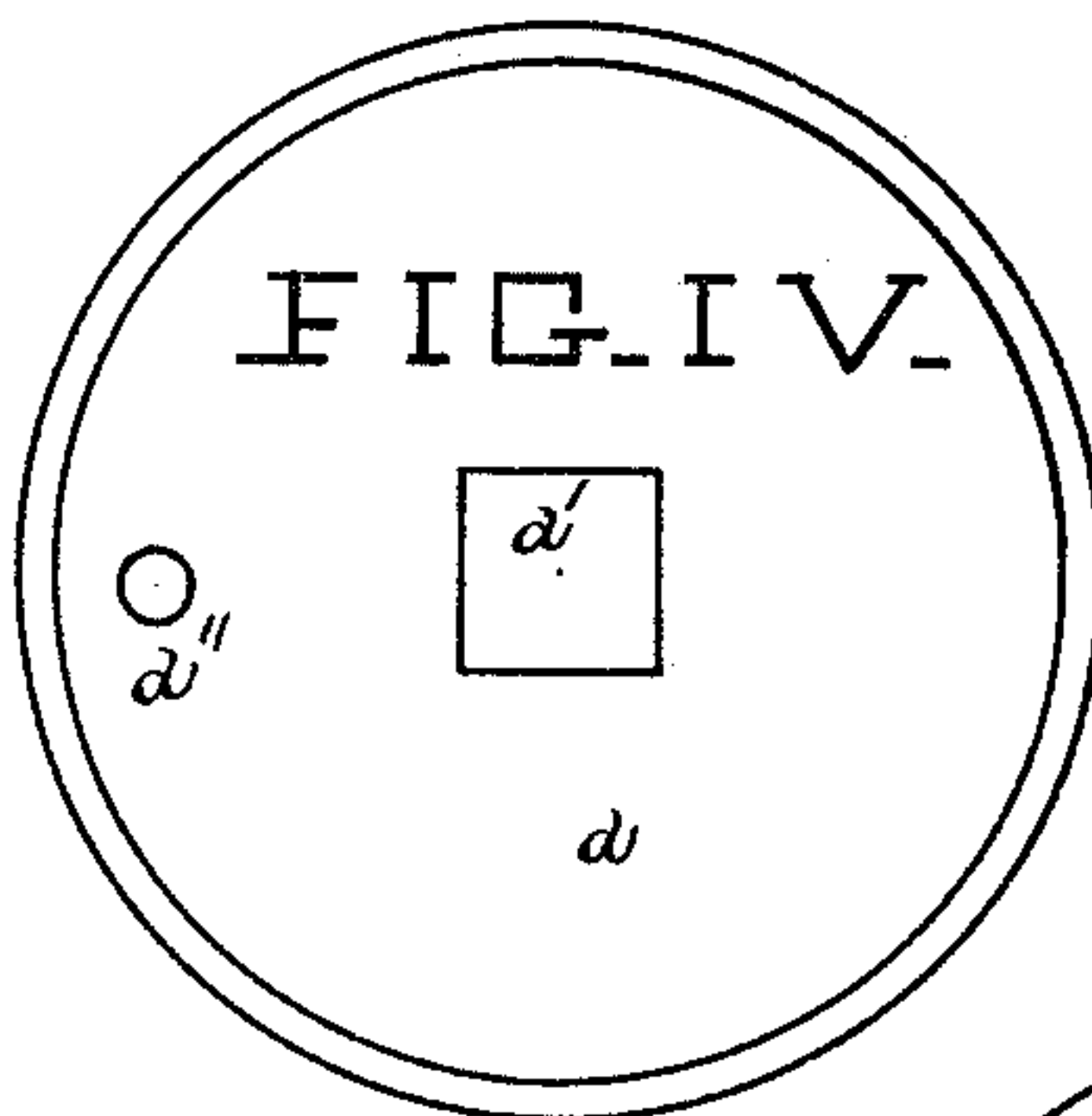


FIG. VI.

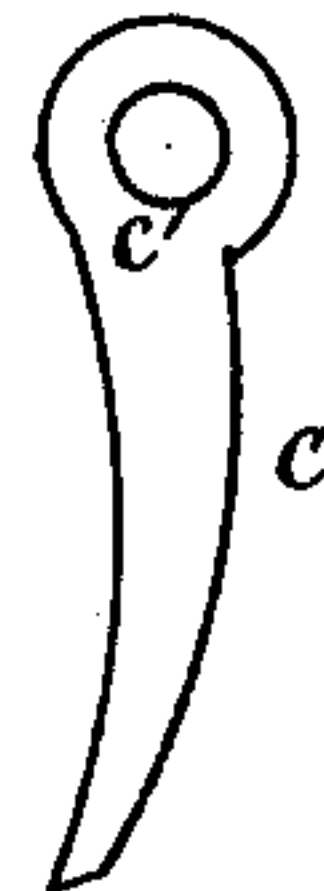


FIG. VII.

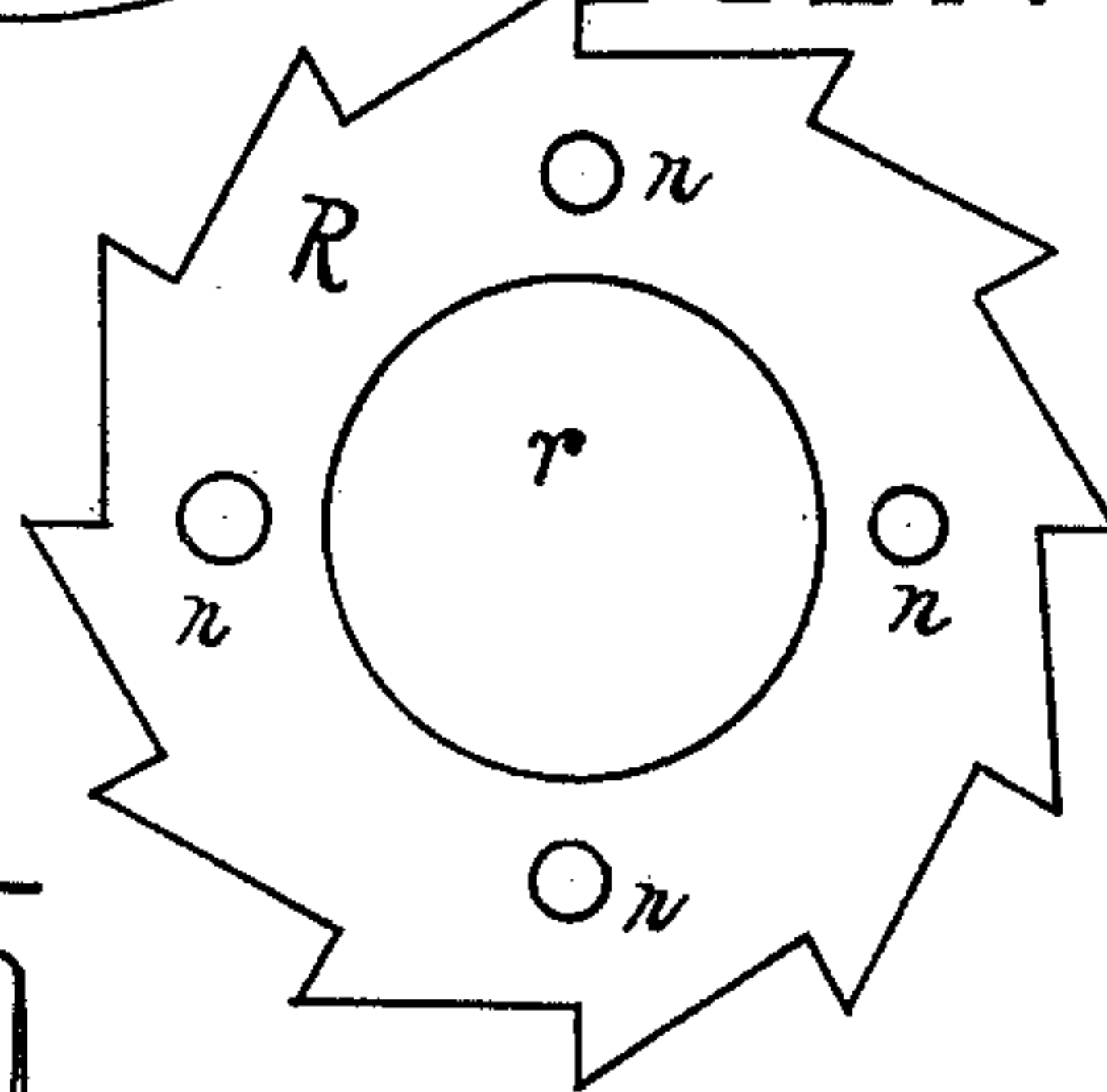
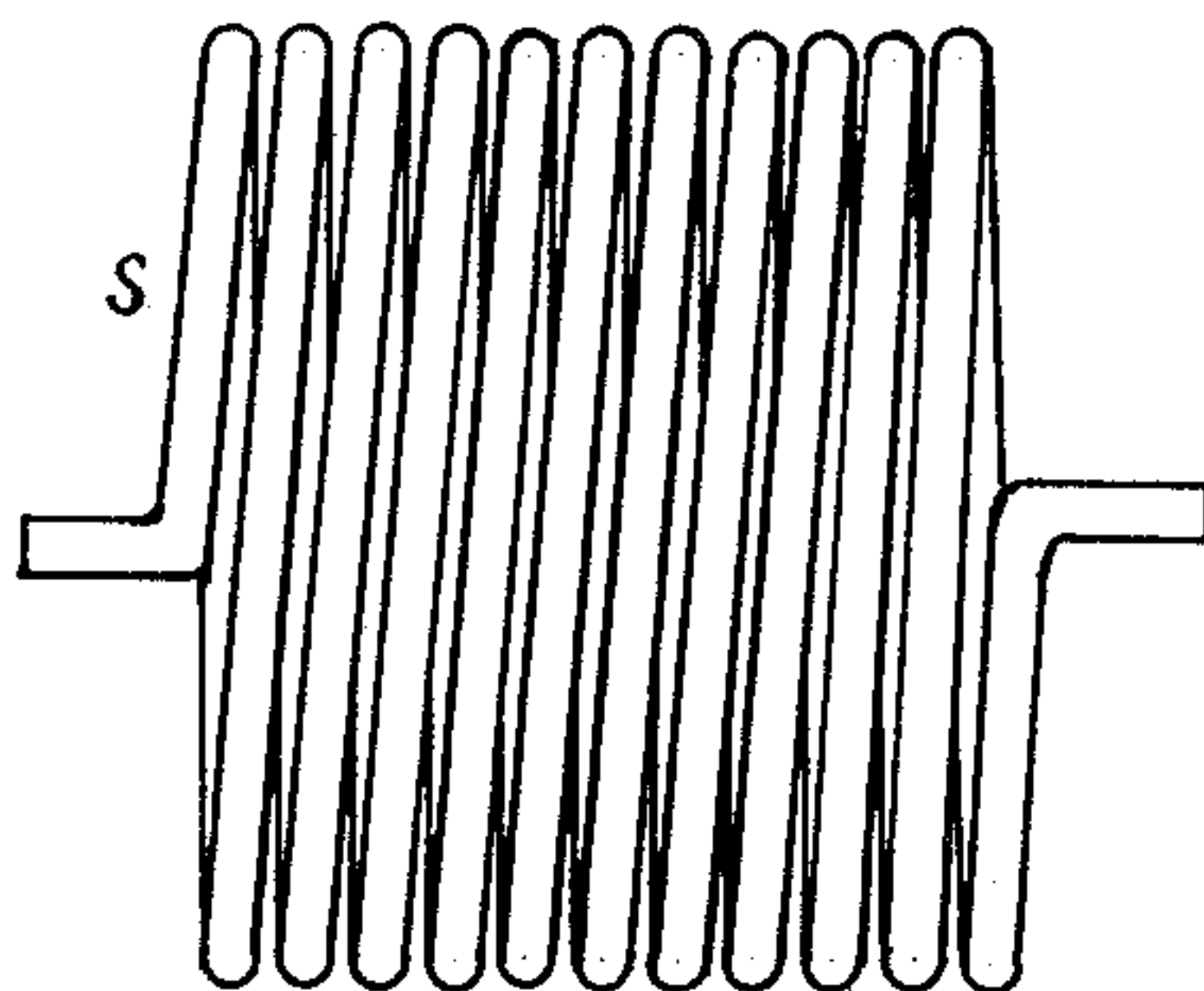


FIG. V.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

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## RECOIL-SPRING FOR BABY-CARRIAGES.

SPECIFICATION forming part of Letters Patent No. 410,583, dated September 10, 1889.

Application filed December 28, 1888. Serial No. 294,843. (No model.)

*To all whom it may concern:*

Be it known that I, WINSLOW L. FAY, a citizen of the United States, residing at Elyria, in the county of Lorain and State of Ohio, have invented a new and useful Recoil-Spring for Baby-Carriages, of which the following is a specification.

My invention relates to improvements in springs for baby-carriages, in which the spring operates in conjunction with one or more wheels of the carriage; and the objects of my improvement are, first, to provide a recoil-spring so constructed that it can be easily connected with or disconnected from one or more wheels of a baby-carriage, and, second, such spring so constructed that when connected with said wheel and the carriage pushed in one direction it will increase the tension of said spring until the carriage is stopped, when the force of the spring operating on the wheel will revolve it in the opposite direction, and by the traction of the wheel return the carriage back to its starting-point. I attain these objects by means of the mechanism illustrated in the accompanying drawings, in which—

Figure I is a side elevation of my invention applied to the broken sections of an axle and hub of the wheel of a baby-carriage. Fig. II is a side elevation of the face-plate of my invention with core attached. Fig. III is a plan view of Fig. II. Fig. IV is a plan view of the barrel or shield covering the spring. Fig. V is a view of a coiled spiral spring. Fig. VI is a plan view of a click or pawl used. Fig. VII is a plan view of ratchet attached to hub of wheel.

Similar letters refer to similar parts throughout the several views.

A represents the broken section of the axle to an ordinary baby-carriage.

B represents the section of the side rail connecting the back and front axles.

C represents the broken section of the hub of a wheel to a baby-carriage.

*a* represents a barrel or shield, the inner end of which is closed except in the center, where it is provided with a square hole *a'* of sufficient size to fit the axle *A* and not permit of said barrel turning. It is also pro-

vided with a small hole *a''*, of sufficient size to receive one end of a spring. The front or outside end of the shield or barrel is entirely open.

*b* represents a face-plate, of sufficient size to cover over the outer end of the barrel *a*, and it may be extended at one side to form an arm for the purpose of attaching a pawl or click *c*, which pawl or click may be of any ordinary form and attached rigidly to the pin *h*, which turns freely in the hole *h'* in the face-plate *b*. To this pin *h* may be attached a lever *e*, which can be used as a handle to throw the click or pawl in or out of connection with the ratchet.

*b'* is a core or cylinder attached to the face-plate rigidly, over and around which the spiral spring winds or turns. This core is of sufficient length to reach the bottom of the shield or barrel *a*, and of such diameter as to allow sufficient room between it and the inside of the barrel *a'* for the spiral spring *s* to work freely. *b''* represents a round hole in this face-plate of sufficient size to allow it to turn on the axle *A* freely.

*b'''* represents a small hole of sufficient size to receive one end of the spring *S*.

*S* represents a spiral coiled spring of sufficient size and length to fit inside the barrel or shield *a*. Its two ends are turned out at right angles and one end inserted through the hole *a''* and the other through the hole *b'''*.

*R* represents a ratchet with a hole *r* in its center, of sufficient size to pass over the shoulder on the axle to a baby-carriage, and it is provided with the screw-holes *n n*, for securing same to the hub of the wheel.

Having fully described the construction and parts of my invention as illustrated, it is put together and operated as follows, to wit: The spring *S* is placed inside the barrel *a*, with one end passing through the hole *a''*. The face-plate *b* is then placed over the uncovered end of the barrel *a*, with the core *b'* inside the spring *S*, and the other end of the spring *S* is passed through the hole *b'''*. The pin *h*, with click or pawl, and lever *e* are next attached and the whole placed on the axle, the square hole *a'* preventing the barrel *a* from turning and the round hole *b''* permitting the face-



plate *b* to turn freely. The plate *b* is placed on the axle, so the part to which the pawl or click is attached will stand uppermost. The ratchet *R* being secured to the hub the wheel  
 5 is placed on the axle and the pawl *c* connected with the ratchet, when all is ready to operate. The carriage on being pushed forward will revolve the wheel to which is attached the ratchet, which, being engaged with the click  
 10 *c*, will force the face-plate *b* around with the wheel *C* and wind up the spring *S* until the tension of the spring is great enough to stop the carriage. The force of the spring still operating on the wheel to turn it in the oppo-  
 15 site direction will then by the traction of the wheel return the carriage back to its starting-point, and therefore as often as the carriage is pushed in one direction it will be returned by the spring to its starting-point. When it  
 20 is not desired to obtain these results, the click or pawl may be disconnected from the ratchet and the wheel permitted to turn freely in either direction.

My invention may be applied to one or  
 25 more wheels of a baby-carriage, and it may be constructed with and connected to the hub of the wheel by gear-wheels, and various forms of springs may be used as well as connecting mechanism; but the form of the parts de-  
 30 scribed I believe to be but most simple and effective.

What I claim as new, and desire to obtain by Letters Patent of the United States, is—

1. In a baby-carriage with the axles at-  
 35 tached to the frame thereof and so constructed as not to revolve, a spring in combination with one or more of its wheels and connected with each other by any intermediate mechanism, all for the purposes above set forth and  
 40 substantially as described.

2. In a baby-carriage with the axles so constructed as not to revolve, a spring in combination with one or more of its wheels, so constructed and connected that they will operate  
 45 in conjunction with each other, all as above set forth and substantially as described.

3. In a baby-carriage with the axles so constructed as not to revolve, a spring in combination with the wheels thereto, and all so  
 50 constructed and connected that the revolving of the wheels in one direction will increase the tension of the spring, and revolving said wheels in the opposite direction will decrease the tension of said spring, all for the purposes  
 55 above set forth and substantially as described.

WINSLOW L. FAY.

Witnesses:

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 M. B. CATER.