

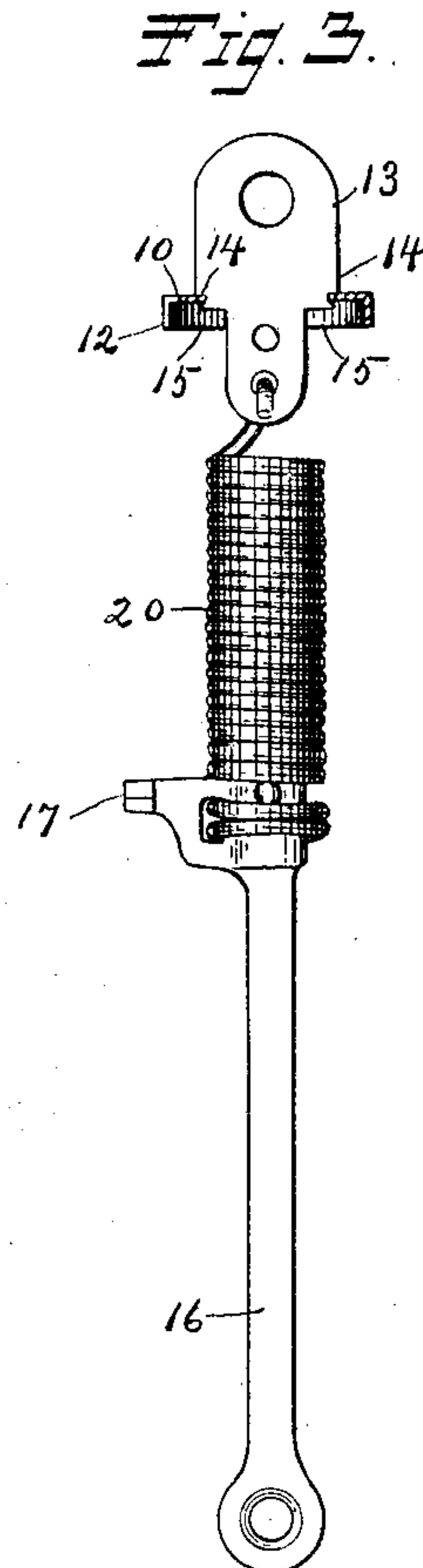
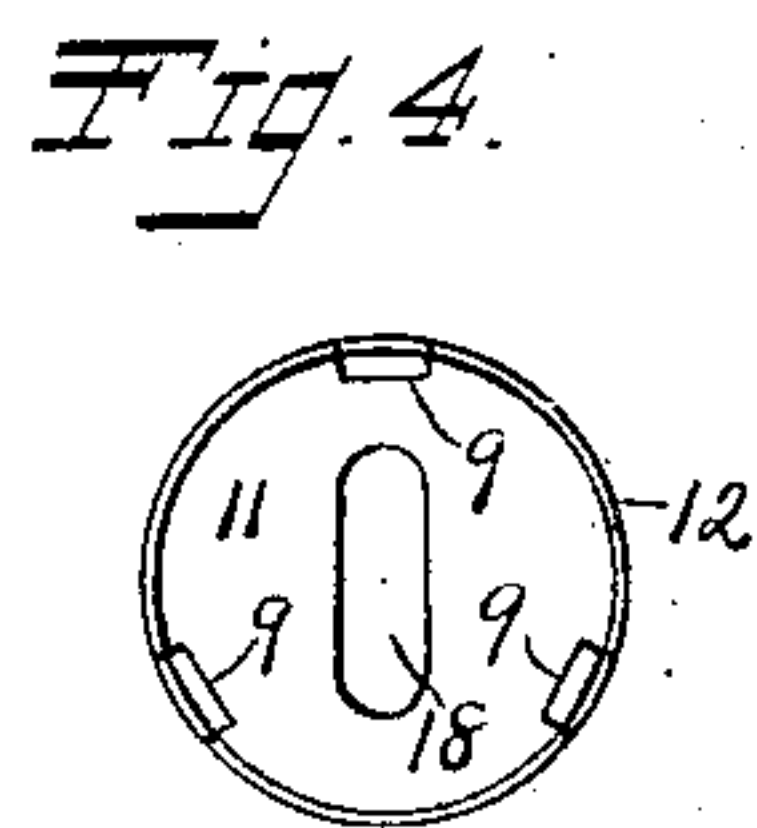
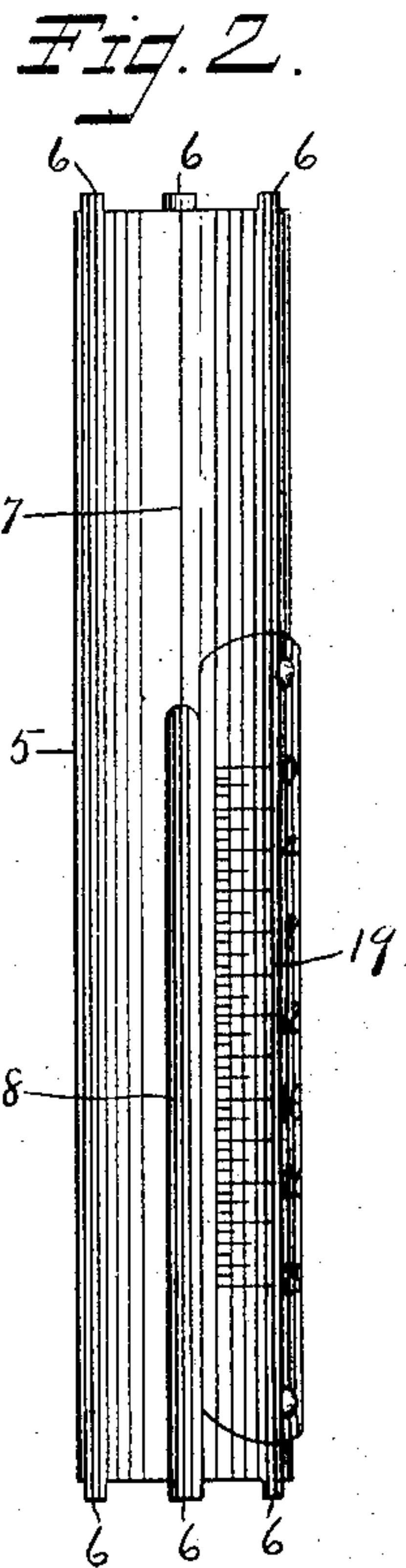
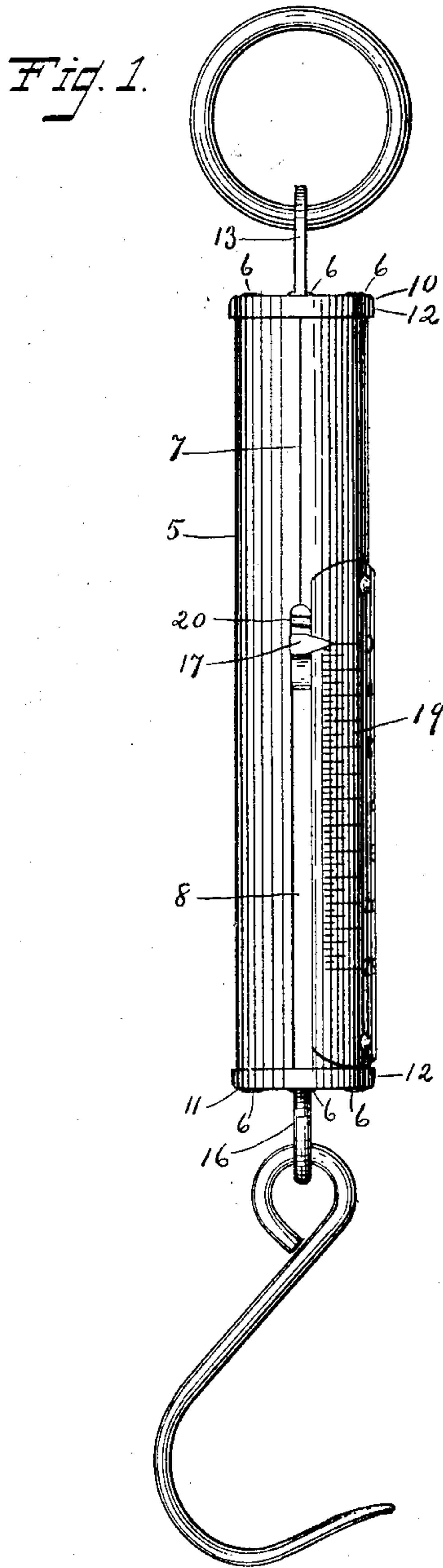
No. 752,918.

PATENTED FEB. 23, 1904.

S. R. MUNSON.
SPRING BALANCE.

APPLICATION FILED JUNE 26, 1902.

NO MODEL.



Witnesses.

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UNITED STATES PATENT OFFICE.

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SPRING-BALANCE.

SPECIFICATION forming part of Letters Patent No. 752,918, dated February 23, 1904.

Application filed June 26, 1902. Serial No. 113,299. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL R. MUNSON, a citizen of the United States, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Spring-Balances, of which the following is a specification.

My invention relates to improvements in spring-balances having a cylindrical form of case; and the object of my improvement is simplicity and economy of construction in the production of an efficient article.

In the accompanying drawings, Figure 1 is a front elevation of my balance. Fig. 2 is a detached front elevation of the case-body. Fig. 3 is a side elevation of the suspension-lug, spring, and draw-bar, together with a sectional view of the upper end of the case. Fig. 4 is a plan view of the lower end of the case.

The cylindrical body 5 of the case is rolled up from a sheet-metal blank, having lugs 6 at its upper and lower ends. At the upper end of the case-body 5 the edges of the blank meet each other in a seam 7 at the front, while the lower part thereof has the edges cut out, so as not to meet, and thereby form the draw-bar slot 8 at the front of the case, as shown. Both ends of the case-body are provided with securing lugs or tenons 6, made integral therewith, the said lugs being formed on the blank before rolling it into the cylindrical form. In forming the said lugs the metal between them is cut away flush with the base of the said lugs to form flat seats for the caps hereinafter described to rest upon. I also form two similar caps or cups for the upper and lower ends 10 11 of the case, each end having a flat disk-like form with a flange or rim 12 of a size to receive into it a short portion of the upper or lower end of the cylindrical case-body. Just inside of this rim 12 there are as many holes or mortises 9 as there are securing lugs or tenons 6, so that when the caps or ends are in place with the lugs extending through these holes the outer ends of the lugs may be riveted or headed over to secure the said caps or ends firmly in place and complete the case. By making the mortises just inside the flange with

the outer edge of each mortise in substantially the plane of the inner face of the flange of the cap the said flange serves as a guide to steer the lugs into the mortises. The lower end 11, Fig. 4, has the draw-bar slot 18 formed in it, and the upper end 10 is of the same form, except as to its slot, which is made of a size and shape to fit the middle portion of the suspension-lug 13, the said lug having the stop-shoulders 14 for resting on the outer face of the upper end 10 and riveting-shoulders 15, which are headed over on the inner face of the said end.

The lower end 11 of the case may be secured to the case-body, as before described, either before or after the upper end is so secured; but before this upper end is secured to the case-body the suspension-lug is secured to the said upper end 10. This end may then be assembled with the spring 20, draw-bar 16, and index 17, suspended from the said lug 13, in proper position and the said upper end secured by heading over its lugs, thereby completing the balance, which may have any form of face-plate 19 with the proper graduation-marks, &c., thereon.

By my improvement the construction is simple and inexpensive, while the balance is durable and efficient.

I claim as my improvement—

In a spring-balance, the herein-described cylindrical case consisting of the rolled-up sheet-metal body having projecting lugs with intermediate flat seats at each end, and the caps having a cylindrical flange at the edge for fitting and inclosing a short portion of the periphery of the said body at each of its ends, the said caps having also mortises just inside the said flange with the outer edge of the said mortises in substantially the plane of the inner face of the said flange, the said lugs passing through the said mortises and headed down to secure the said caps in place.

SAMUEL R. MUNSON.

Witnesses:

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