No. 722,740. PATENTED MAR. 17, 1903.

S. R. MUNSON.

SPRING BALANCE.

APPLICATION FILED JUNE 26, 1902.

NO MODEL.

Fig. 1.

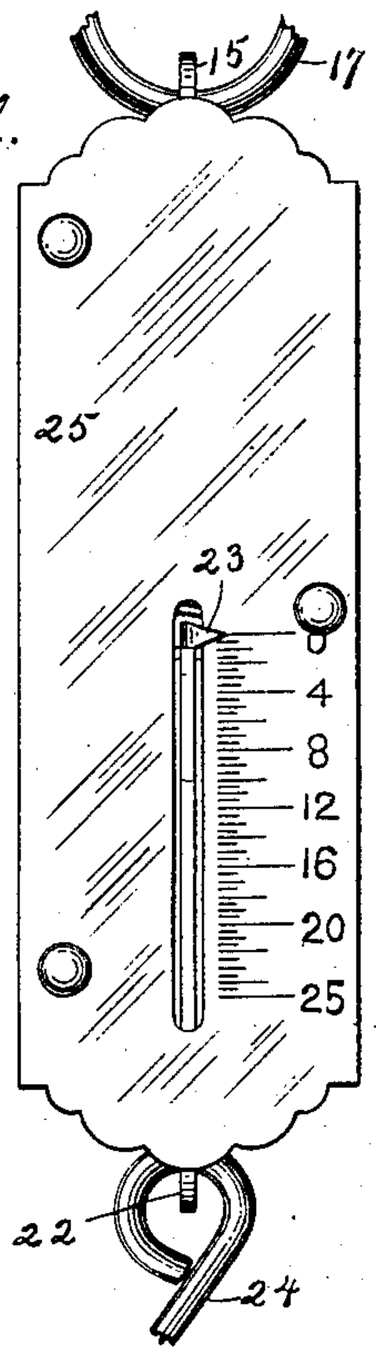


Fig. 2.

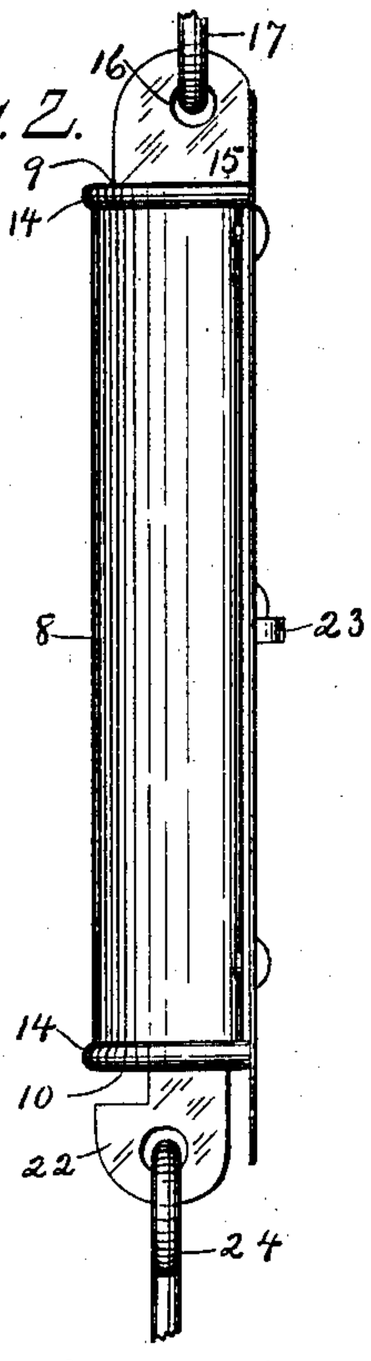


Fig. 3.

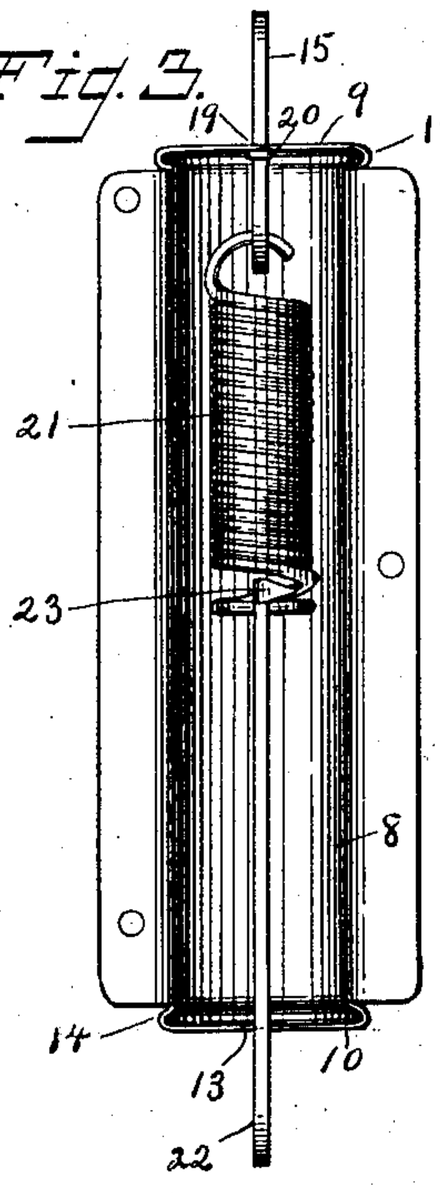


Fig. 4.

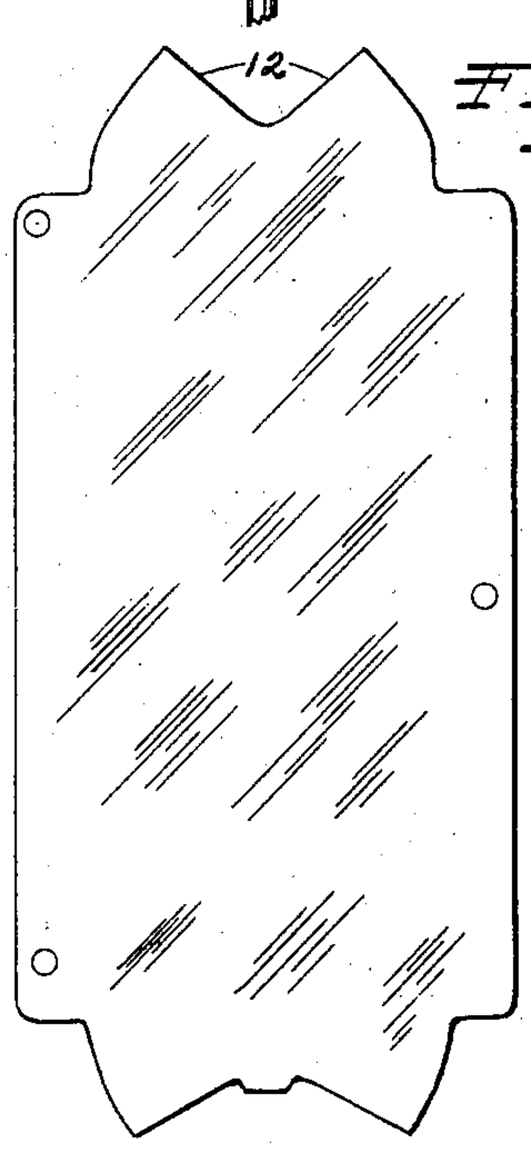


Fig. 5.

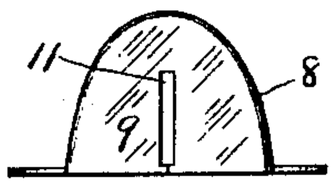


Fig. 6.

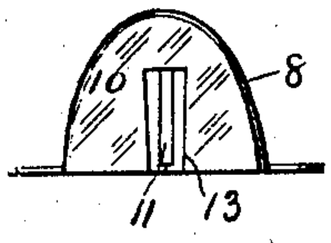
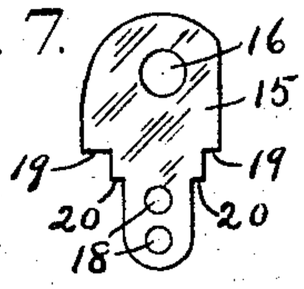


Fig. 7.



Witnesses.

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UNITED STATES PATENT OFFICE.

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SPRING-BALANCE.

SPECIFICATION forming part of Letters Patent No. 722,740, dated March 17, 1903.

Application filed June 26, 1902. Serial No. 113,300. (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; and the object of my improvement is simplicity and economy in construction and at the same time to produce a durable and efficient article.

In the accompanying drawings, Figure 1 is a front elevation of my balance, the suspension ring and hook being partly broken away. Fig. 2 is a side elevation of the same. Fig. 3 is a front elevation of the same with the face-plate removed. Fig. 4 is a plan view of the blank from which the body of the case is formed. Fig. 5 is a detached plan view of the case. Fig. 6 is a reverse plan view of the same. Fig. 7 is a detached side elevation of the suspension-lug of my balance.

With the exception of the construction of the case-body and the suspension-lug as secured thereto my balance is or may be of any ordinary form.

I form the case-body 8, together with its upper and lower ends 9 10, Figs. 5 and 6, all of one piece of sheet metal. The metal is first blanked out in the form shown in Fig. 4 and then struck up in dies to the form shown in Figs. 2, 3, and 6 and the form shown in Fig. 5, excepting that in the said Fig. 5 the hole 11 has been punched out to give it the rectangular form shown. As first formed, the two edges 12 at the upper end of the blank, Fig. 4, come substantially together, so as to form only a slit which has been dressed out by punching the said rectangular hole along the slit in the said upper end. The lower end 10 of the case as struck up from the blank, Fig. 4, has the draw-bar slot 13 formed therein, as shown, so as to require no trimming. In general the form of the U-shaped case-body 8 is substantially the same as in prior balances, and I form it with the bead 14 at the junction of the body and ends.

The suspension-lug 15 is formed with the usual hole 16 for the suspension-ring 17 and holes 18 for the spring 21, while its middle portion is provided with stop-shoulders 19 and riveting-shoulders 20, with a short length between the said upper and lower shoulders, as shown in Fig. 7. This suspension-lug has its shouldered middle portion inserted in the hole 11, with the stop-shoulders 19 seated on the outer face of the upper end 9 of the case, while the riveting-shoulders 20 are headed over on the inside to firmly secure the suspension-lug therein, as shown. The usual spring 21 is then hung on the lug 15 with attached draw-bar 22 and index 23, the lower end of the draw-bar extending down through the draw-bar slot 13 and provided with the suspension-hook 24. The ordinary face-plate 25 is then secured to the front of the case-body and the balance is complete.

Although the construction is cheap and simple, the balance is believed to be in every way as durable and efficient as the more expensive ones now in common use.

I am aware that prior patents show spring-balances in which a seamless U-shaped body and ends of the case are drawn up from sheet metal in dies with the upper and lower ends of the U-shaped body rounded, that another prior patent shows a spring-balance with the trough-shaped body and ends of the case of an angular form made from a single piece of sheet metal by bending along the lines of the angles, and that a prior British patent shows a spring-balance with the U-shaped body and upper end of the case formed in one piece of sheet metal, the said body being curved in cross-section throughout its length, while the upper end is formed by bending in wings along the lines of the angles between the body and end. All of said prior art is hereby disclaimed.

I claim as my invention—

The herein-described spring-balance, having the U-shaped body and right-angular upper and lower ends all struck up from a single piece of sheet metal with the bead 14 at their junction, the said upper end having the central slit and an inclosed rectangular hole along the line of said central slit, and the suspension-lug 15 having stop-shoulders and riveting-shoulders 19 and 20, with its middle portion within the said rectangular hole and with the riveting-shoulders headed over on the inside of the said upper end of the case.

SAMUEL R. MUNSON.

Witnesses:
E. F. HALL,
C. B. HANCE.