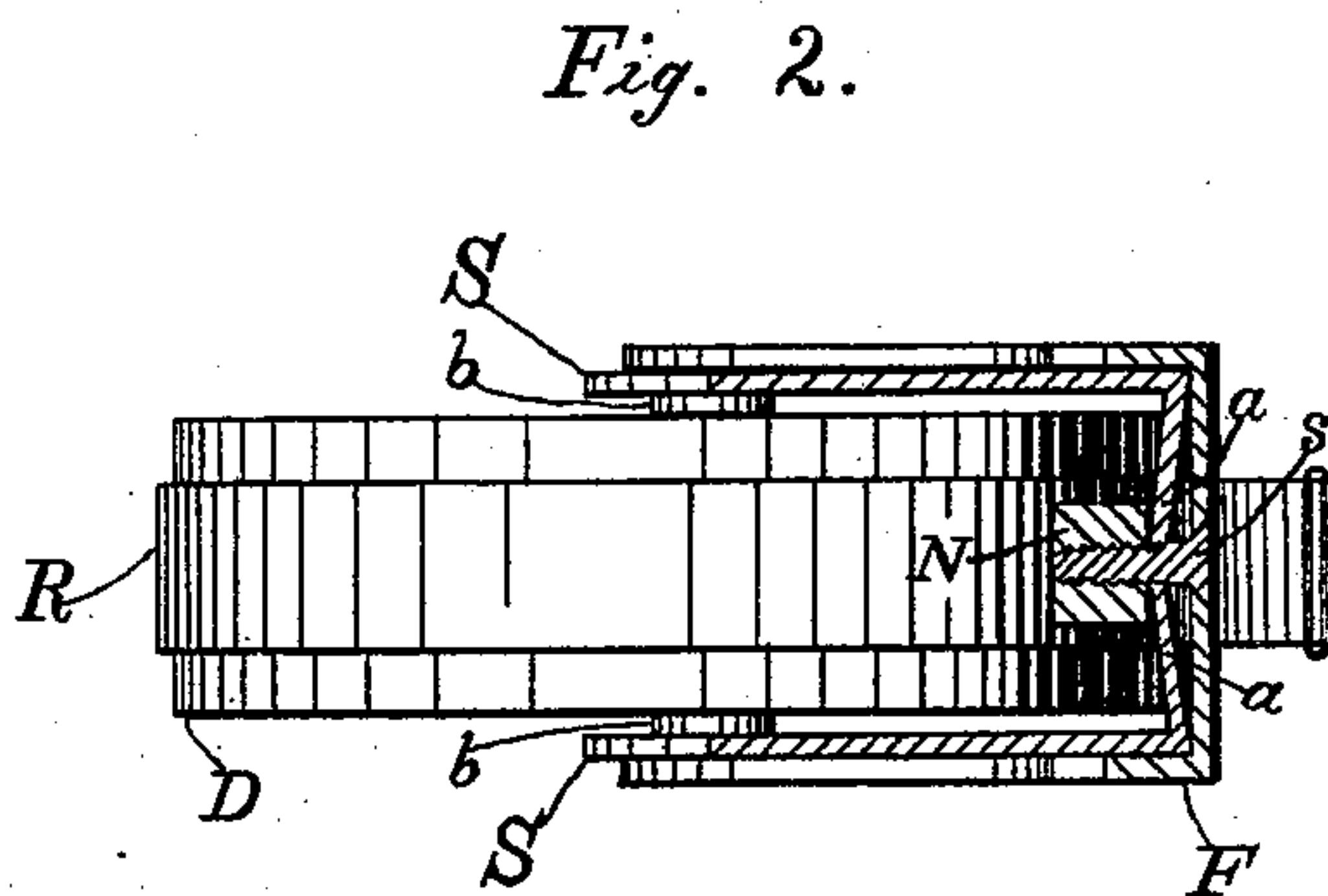
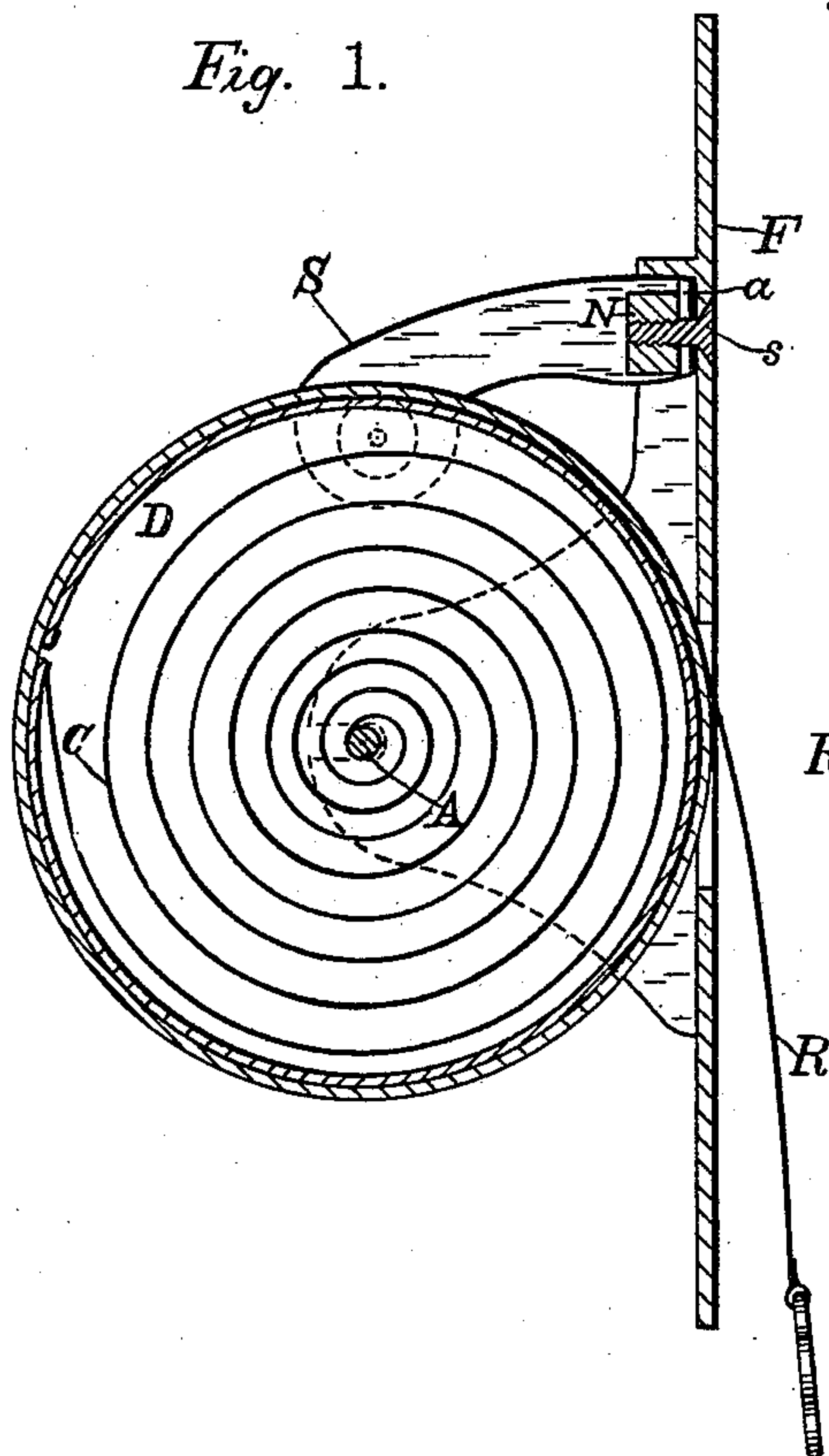


(No Model.)

W. S. JENNINGS.  
SPRING SASH BALANCE.

No. 400,918.

Patented Apr. 9, 1889.



WITNESSES:

Henry H. Conklin.  
Oscar D. Weed.

INVENTOR

Walter S. Jennings,

BY

Adelbert Cronise,  
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# UNITED STATES PATENT OFFICE.

WALTER S. JENNINGS, OF ROCHESTER, NEW YORK, ASSIGNOR, BY MESNE ASSIGNMENTS, TO ADELBERT CRONISE, OF SAME PLACE.

## SPRING SASH-BALANCE.

SPECIFICATION forming part of Letters Patent No. 400,918, dated April 9, 1889.

Application filed September 4, 1888. Serial No. 284,542. (No model.)

*To all whom it may concern:*

Be it known that I, WALTER S. JENNINGS, a citizen of the United States, and a resident of Rochester, in the county of Monroe, State of New York, have invented certain new and useful Improvements in Spring Sash - Balances, of which the following is a specification.

My invention relates to improvements in that class of window-sash balances in which the sash is supported at each side by the metal ribbon attached thereto, and passes over and around a revolving spring, upon which it is wound, and the weight of the sash supported by the action of a coiled spring within the drum, the drum being held at rest with the sash in any desired position by the action of the brake.

In the spring sash-balances heretofore in use the retarding and restraining pressure of the brake has been applied either upon the outer coil of the ribbon wound upon the drum, or upon the narrow edges of the surface of the periphery of the drum on each side of the ribbon wound thereon, or upon the beveled portions of the sides of the drum at its periphery. In the process of construction and in practical use objections are found to each of the brakes thus applied and to the particular forms of spring by which they are actuated.

The objects of my invention are to provide a brake and a spring for actuating the same which shall be of simple construction, easy of adjustment, and reliable and uniform in their operation. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal vertical section of the whole device; and Fig. 2, a cross-section of the drum, brake, and spring, similar letters referring to similar parts.

F is the frame which sustains all the parts in their proper relations.

D is a spring-drum fitted in the ordinary manner to be revolved in one direction by the coiled spring C within, one end of the spring being attached to the drum at or near its periphery, the other end being fixed to the stationary axis A, upon which the drum revolves, the ends of the axis being held by the frame F.

R is a ribbon, of metal or other suitable material, for sustaining the sash, one end of the ribbon being attached to the edge of the sash and the other attached to the periphery of the drum in such a manner that when revolved by the coiled spring within it the ribbon will be wound upon the drum and exert a lifting action upon the sash.

S S are two pieces of spring metal provided with the buffers *b b*, which press toward each other against the opposite sides of the interposed drum.

*s* is a set-screw, provided with the nut N, bearing upon the lower arms, *a a*, of the springs S S. In adjustment the set-screw *s* is turned, and the arms *a a* of the springs S S are caused to be pressed down by the nut N until the buffers *b b* are thereby pressed against the opposite sides of the drum with sufficient force to produce the desired restraining action upon the rotation of the drum—that is, until the weight of the sash, plus the restraining action of the brake, balances the rotating force of the spring-drum.

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

In a spring sash-balance, the adjustable opposing brakes S S, fitted to press toward each other against the opposite sides of the interposed drum, substantially as shown and described.

WALTER S. JENNINGS.

Witnesses:

GEO. FORCE PARKER,  
ADELBERT CRONISE.