

W. H. LAWSON.
 SPRING.
 APPLICATION FILED DEC. 15, 1908.

1,004,579.

Patented Oct. 3, 1911.

Fig. 1

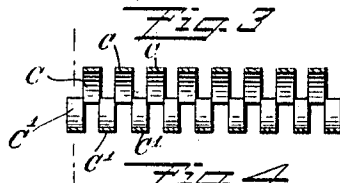
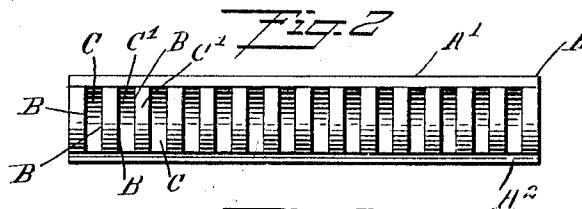
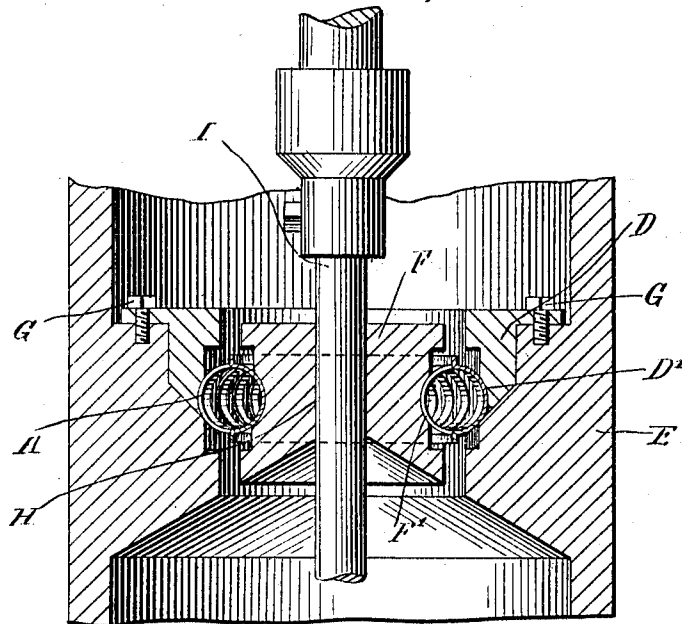
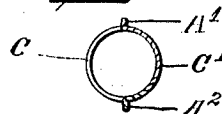


Fig. 4



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SPRING.

1,004,579.

Specification of Letters Patent.

Patented Oct. 3, 1911.

Application filed December 15, 1909. Serial No. 533,131.

To all whom it may concern:

Be it known that I, WELCOME H. LAWSON, a citizen of the United States, and a resident of the town of Poughkeepsie, in the county of Dutchess and State of New York, have invented certain new and useful Improvements in Springs, of which the following is a specification.

My invention relates to springs formed from sheet metal, and the object of my invention is to provide a spring formed from a sheet of metal and suitable for use in a machine such as a milk separator to form a yielding support for a vertical shaft which it is designed to rotate at a high speed.

Referring to the drawings which form a part of this specification, Figure 1 is a sectional elevational view of a portion of a machine disclosing my improved spring in position therein. Fig. 2 is a side view of the spring before it is bent in circular form. Fig. 3 is a cross sectional plan view of a portion of said spring before being formed in a circle. Fig. 4 is a cross sectional view taken on the dotted line of Fig. 3.

A indicates the spring which is formed by taking a flat sheet of spring metal and with a suitable die cutting said sheet on the lines B—B—B, etc., thus dividing the center portion of the blank into a series of spring elements C and C'. The element C being forced in one direction and the element C' in the opposite direction so as to form from said blank a sheet having semi-circular spring elements and held together by the edge strips A' and A². After the spring is formed as illustrated in Fig. 2, the spring as a whole is formed in a circle with its two ends in contact and is inserted between the castings D, E and F as illustrated in Fig. 1. The casting F is provided with an annular groove F' in which the spring is located and is then inserted with the spring

in position in casting E, and the casting D which is also provided with a grooved surface at D' is placed in position and held to the casting E by screws G.

The hole H is provided in the casting F through which extends a vertical shaft I, the upper end of which usually carries a bowl for separating cream and milk, and the lower end of which runs in a bearing that will permit the shaft to rock from its vertical position in service. When the bowl containing the milk is rotated at a high speed it is difficult to balance it and the result is that the centrifugal action tends to throw the rod I from its vertical position. The object of the spring A is to furnish a cushion that will permit the shaft I to run out of its vertical position to a predetermined degree and act as a support for said shaft.

It is not necessary that the elements C and C' should be forced to form semi-circles, but they should be forced sufficiently far to cause said elements to act as springs to accomplish the object in view.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

A circular spring cushion formed from a single piece of spring metal having at each edge a web and juxtaposed spring elements projected from said webs alternately to the opposite side thereof; said spring elements being formed integrally at each end with said webs and arranged to permit the separation of said webs laterally.

Signed at New York city in the county of New York and State of New York this 10th day of December A. D. 1909.

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Witnesses:

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