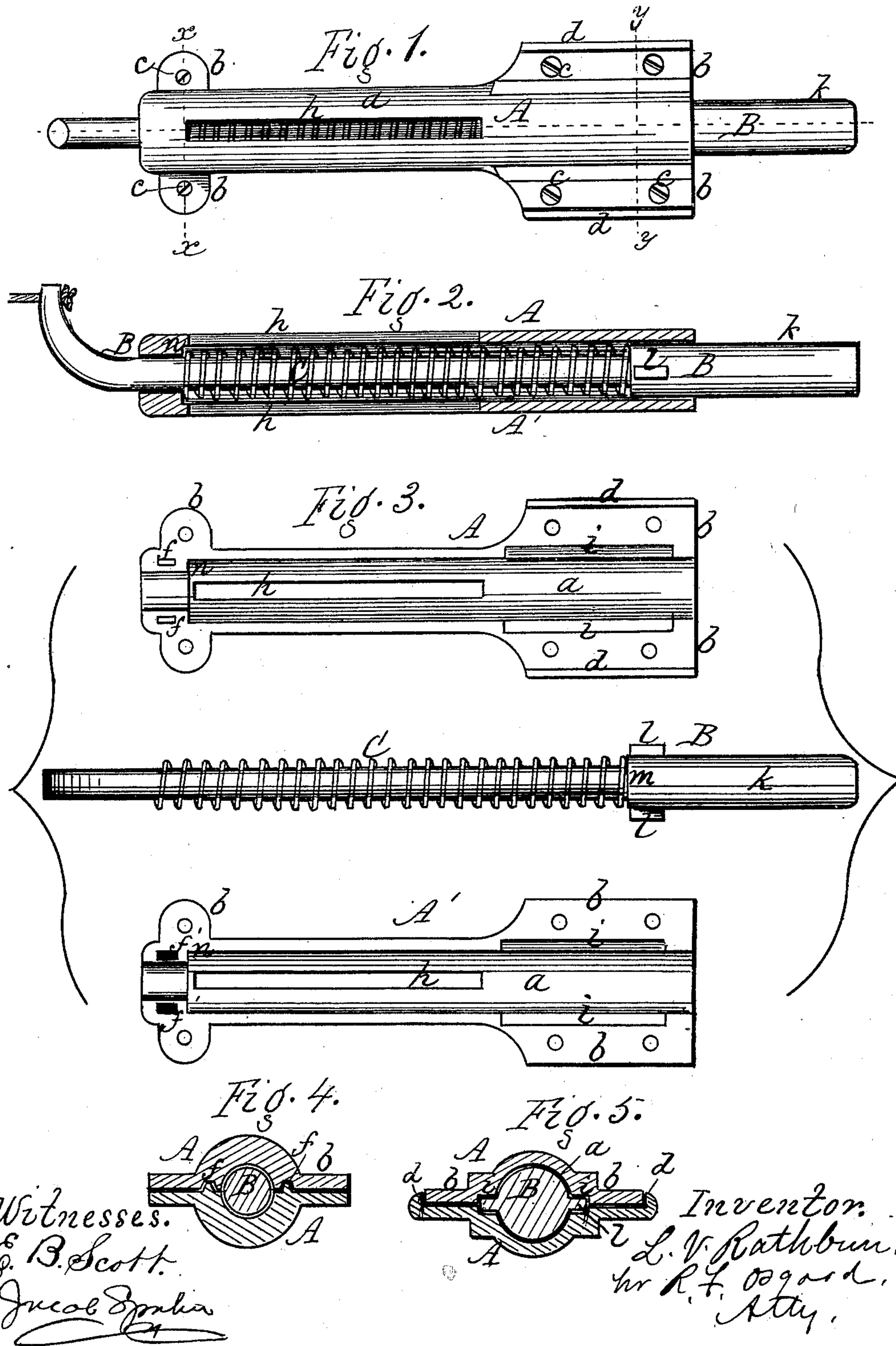


L. V. RATHBUN.

SPRING-BOLTS FOR USE IN FLOUR-BOLTS, &c.

No. 176,051.

Patented April 11, 1876.



UNITED STATES PATENT OFFICE.

LEWIS V. RATHBUN, OF EAST PEMBROKE, NEW YORK.

IMPROVEMENT IN SPRING-BOLTS FOR USE IN FLOUR-BOLTS, &c.

Specification forming part of Letters Patent No. **176,051**, dated April 11, 1876; application filed March 10, 1876.

To all whom it may concern:

Be it known that I, LEWIS V. RATHBUN, of East Pembroke, in the county of Genesee and State of New York, have invented a certain new and useful Improvement in Spring-Bolts; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a plan of my improvement. Fig. 2 is a vertical section. Fig. 3 is a plan of the several parts separated. Fig. 4 is a cross-section in line *x x* of Fig. 1. Fig. 5 is a cross-section in line *y y* of Fig. 1.

My improvement is applicable to various purposes where it is desirable to make the case of the bolt open, to allow the escape of fine dust that may enter the same in use, and which otherwise might obstruct the action of the bolt and spring. It is intended, however, more particularly for use in flour bolts where snapping-cords are employed, such as are shown in my Patent No. 158,520, of January 5, 1875, and is designed to allow the escape of the flour which enters the case of the bolt.

The invention consists in the novel construction and arrangement of the devices, as hereinafter more fully described and definitely claimed.

A A are the two halves forming the casing of the bolt. These are counterparts, and fit together, forming a cylindrical chamber, *a*, in which rests the body of the bolt. The halves are provided with lateral flanges *b b* at opposite ends, through which pass the screws *c c*, which secure the halves together, and also attach the device to the supporting part.

At one end of the case the lower flanges *b* have upwardly projecting lips *d d*, which serve to embrace and center the counterpart. At the opposite end the flanges have projecting lugs *f f*, which fit in corresponding sockets *f' f'*. By this means the parts constituting the case are retained firmly in position and prevented from slipping.

h h are slots or openings, which are formed

in the body of the case. They may be at the top and bottom or at the sides, and in any desired number. They may be either in the form of slots, as shown, or round holes. Their object is to allow the free escape of the flour which enters the case, and would soon obstruct the action of the bolt and spring were not some provision made for its discharge.

By the means above described the flour is discharged as fast as it gathers, and no obstruction can occur. The device forms a skeleton case, allowing free escape of the flour, but retaining the bolt and spring in place.

i i are offsets or grooves, extending from the chamber *a* between the plates, and forming ways, in which the spline of the bolt runs to keep the latter from turning. These grooves are made of sufficient length to allow proper throw of the bolt. B is the bolt. The enlarged end *k* projects some distance beyond the end of the case, and serves as the cam-point to strike the incline, which throws the bolt back to slack the snapping-cord. For this purpose the end of the bolt is rounded on both sides, as shown at *e*, so as to be used in either direction. On this enlarged portion, within the case, is a spline, *l*, which runs in the ways *i i*, and also a shoulder, *m*. The body of the bolt is made of smaller diameter, and around it rests the spiral spring C, which has its bearings between the shoulders *m n*. The outer end of the bolt is turned up, as shown in Fig. 2, and serves as the attachment for the snapping-cord.

The parts above described can all be cast, with the exception of the spring. It is, therefore, simple and cheap in construction.

By making the case in halves, as described, no fitting is required, and the bolt is easily inserted or removed. The slotted form of the case renders the device self-clearing.

I do not claim, broadly, a spring-bolt for the purpose described; but,

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

1. The case A A, made in halves, constructed with the slots or holes *h h*, flanges *b*

b, barrel *a*, and side grooves *ii*, to receive the spring-bolt B, as and for the purpose specified.

2. The combination, with the slotted case A A, having side grooves *ii*, of the bolt B, constructed with the spline *l* and the spring C, as and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

LEWIS V. RATHBUN.

Witnesses:

GEORGE W. RATHBUN,
W. THISTLE.