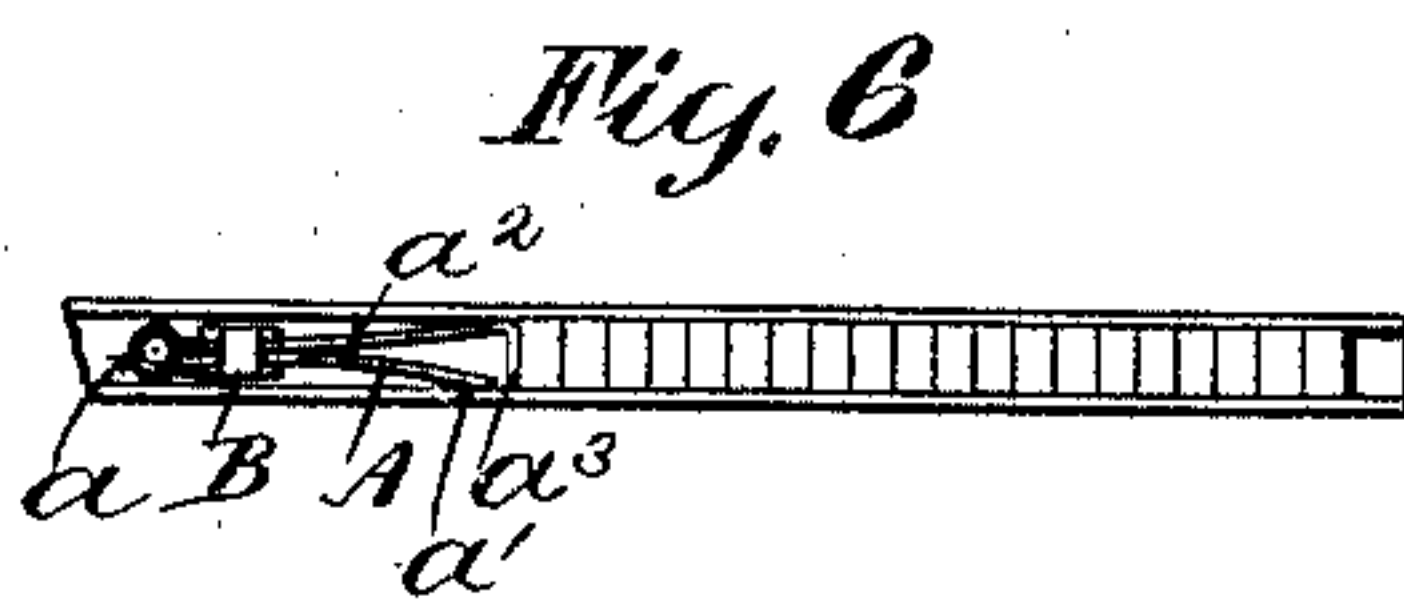
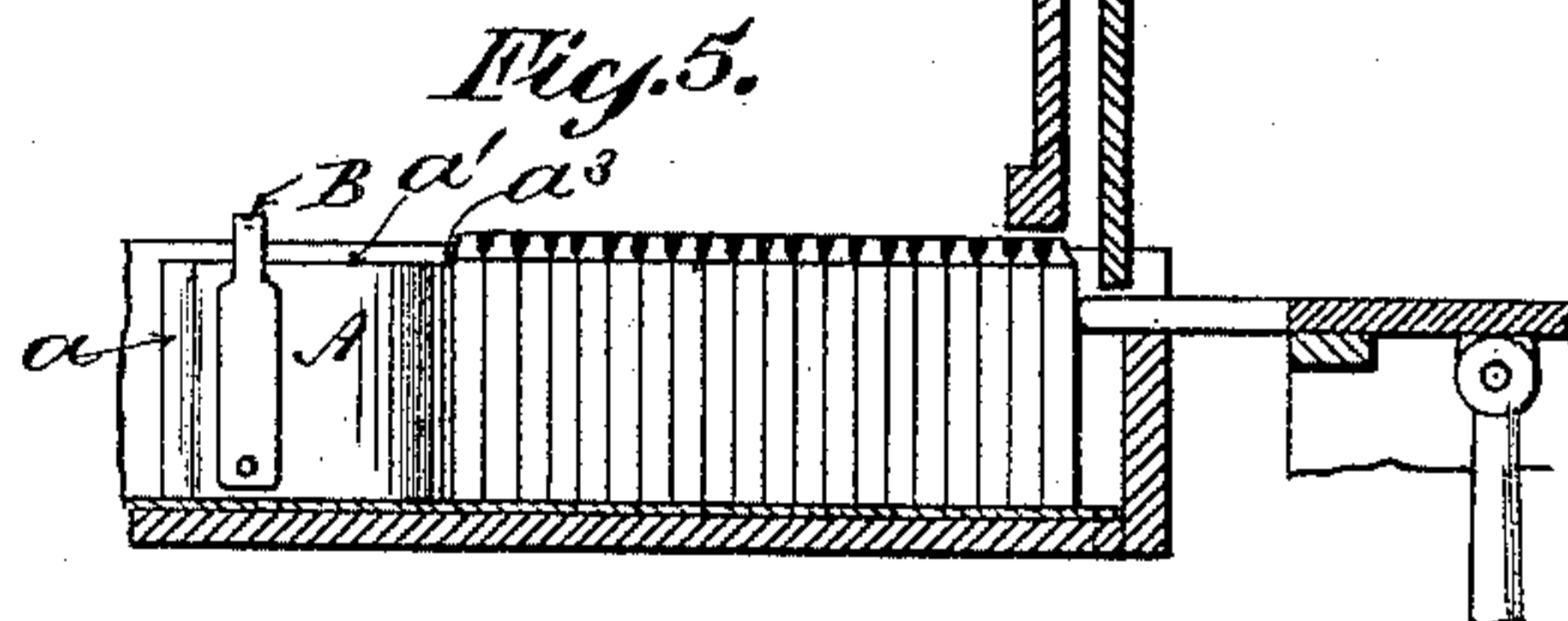
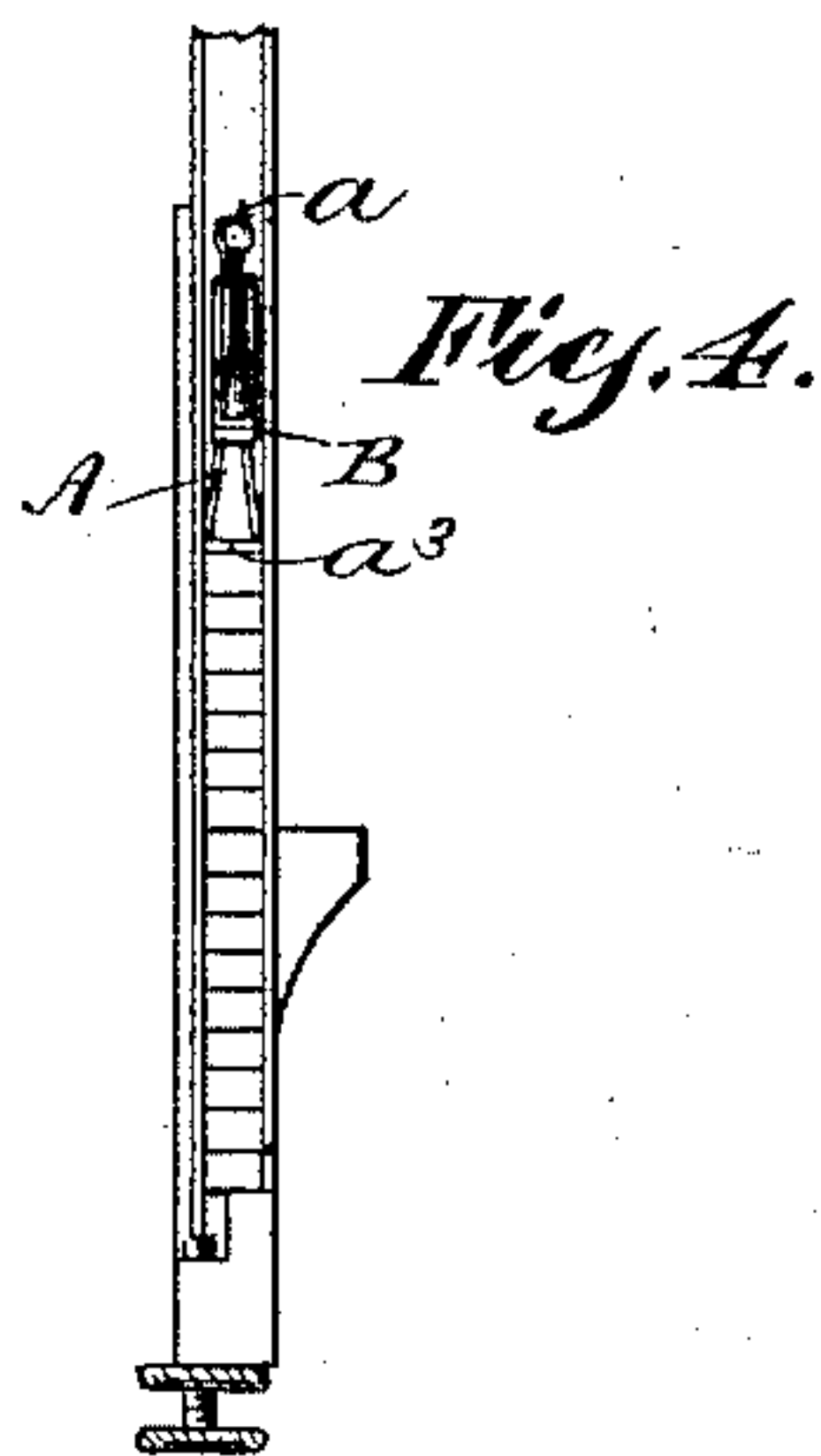
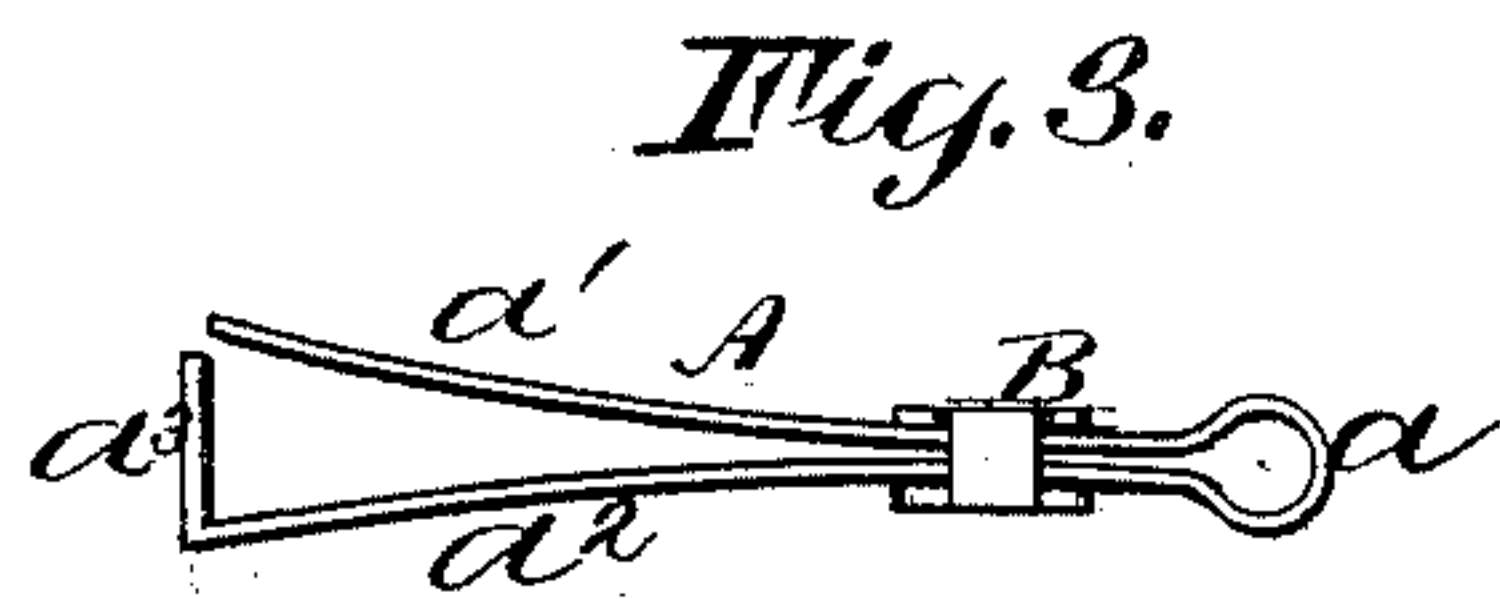
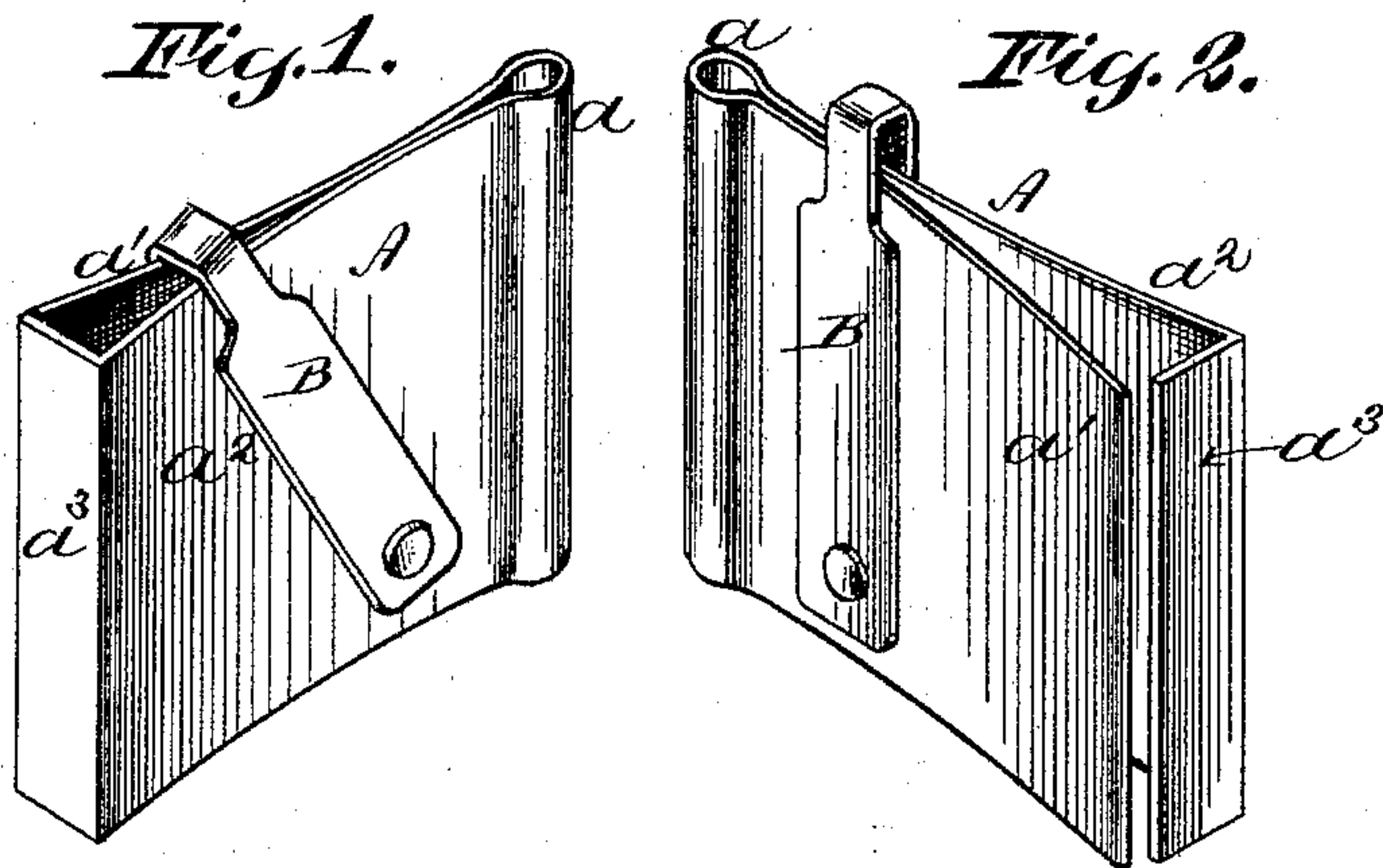


(No Model.)

L. K. JOHNSON.  
SLUG FOR TYPE CONTAINING CHANNELS.

No. 477,008.

Patented June 14, 1892.



Witnesses:  
O. W. Gardner  
G. J. Miall

Inventor:  
Louis K. Johnson  
By his Attorney  
George William Miall



# UNITED STATES PATENT OFFICE.

LOUIS K. JOHNSON, OF BROOKLYN, ASSIGNOR TO THE ALDEN TYPE MACHINE COMPANY, OF NEW YORK, N. Y.

## SLUG FOR TYPE-CONTAINING CHANNELS.

SPECIFICATION forming part of Letters Patent No. 477,008, dated June 14, 1892.

Application filed May 2, 1891. Serial No. 391,402. (No model.)

*To all whom it may concern:*

Be it known that I, LOUIS K. JOHNSON, a citizen of the United States, residing in the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Slugs for Type-Containing Channels, of which the following is a description sufficient to enable others skilled in the art to which the invention appertains to make and use the same.

My invention relates to the slugs which are used in type-containing channels for supporting the types contained therein, and is especially adapted for use in connection with the portable type-channels used alternately in the type-distributing apparatus and in a setter or case.

The object is to afford a slug that may be used either as such in the ordinary way or as a follower to a column of type, and also one in which the frictional contact with the interior sides of the channel may be increased or diminished. Thus when used to uphold the forward end of a column of type distributed into a type-containing channel and forwarded therein under the influence of a reciprocating pusher or other similar device the pressure of the slug against the side walls of the channel may be augmented so as to afford a suitable resistance to the action of the forwarding mechanism which would otherwise have a tendency to throw the slug ahead of the end of the column of types at each stroke were the slug loose and free, thereby rendering the whole column loose and irregular.

The invention consists, primarily, in a slug formed with one or more elastic resilient sections which tend constantly to expand against the interior wall or walls of the type-containing channel, the degree of expansion and the pressure exerted being controlled by an adjustable clamp; and, secondarily, the invention consists in forming the body of such a slug out of a single piece of elastic sheet metal and in hinging the clamp thereto, substantially as herein shown and described.

In the accompanying drawings, Figure 1 is an isometrical view of my improved form of slug closed; Fig. 2, a similar view taken from the opposite side and showing the device ex-

panded. Fig. 3 is a top view of the device when in the condition illustrated in Fig. 2; Fig. 4, a front elevation of the lower portion of a type-containing channel supported on a finger-piece, the slug in this case being contracted and used as a follower on top of the column of types. Fig. 5 is a sectional elevation illustrating the use of the slug as a type-line end support or type-preceder in a distributing apparatus. Fig. 6 is a top view of the receiving end of the type-containing channel shown in Fig. 5.

It will be seen that the essential feature of construction consists in providing the slug with means for effecting a lateral pressure against the side walls of the type-containing channel, and it is obvious that it is immaterial whether the body of the device itself is made elastic and expansible or whether a portion of the device is made solid and provided with one or more expanding sections. A convenient and economical way is to construct the body of the slug A of a single piece of elastic sheet metal, as shown in the drawings. In this case a suitable strip of the metal is permanently bent and set into the required shape to form the two leaves  $a'$   $a^2$ , the ends of which tend constantly to spring apart. In order to widen the bearing-surface upon the floor of the channel at the other end, the fold is preferably formed into a loop  $a$ . One of the free ends—as, for instance, in the drawings that of the leaf  $a^2$ —is bent inward transversely to form the type-bearing surface  $a^3$ , which is always presented to the flat side of the type at the end of the line.

A clamp or contractor B is used in connection with the expanding leaves  $a'$   $a^2$ , preferably pivoted thereto at its lower end near the lower edges of the leaves. It will be seen that the contractor B straddles the upper edges of the leaves, and the space between its legs is of less width than the slug when expanded, so that when inclined forward more or less, as indicated in Fig. 1, it will compress the free ends of the leaves  $a'$   $a^2$  toward each other, and thereby lessen or remove the lateral pressure against the side walls of the containing-channel.

Instead of the bifurcated form of clamp B

a simple band or loop sliding upon the leaves  
a' a<sup>2</sup> may be substituted, if preferred.

I do not confine myself to the identical form  
and construction of parts shown, since it is  
5 obvious that various modifications may be  
made in minor details without deviating from  
the essential features of my invention.

What I claim as my invention, and desire  
to secure by Letters Patent, is—

10 1. A slug for type-channels, formed with one  
or more expansible sides and provided with

a contractor, substantially in the manner and  
for the purpose described.

2. A slug formed of a single piece of spring  
metal, combined with a contractor, substan- 15  
tially in the manner and for the purpose de-  
scribed.

LOUIS K. JOHNSON.

Witnesses:

GEORGE WILLIAM MIATT,  
D. M. GARDNER.