

No. 625,931.

Patented May 30, 1899.

L. K. JOHNSON & A. A. LOW.  
TYPE SETTING APPARATUS.

(Application filed July 25, 1898.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1.

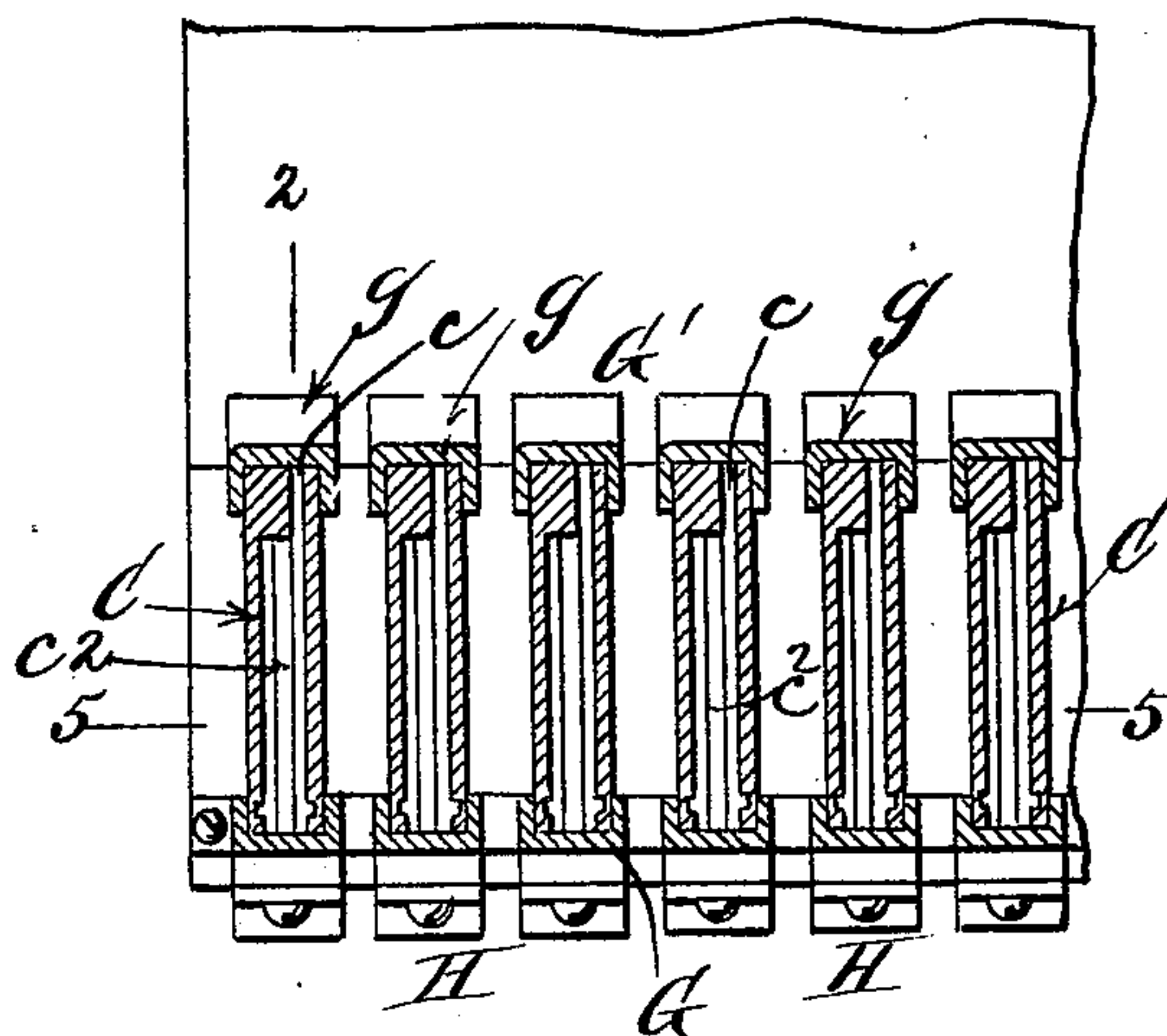
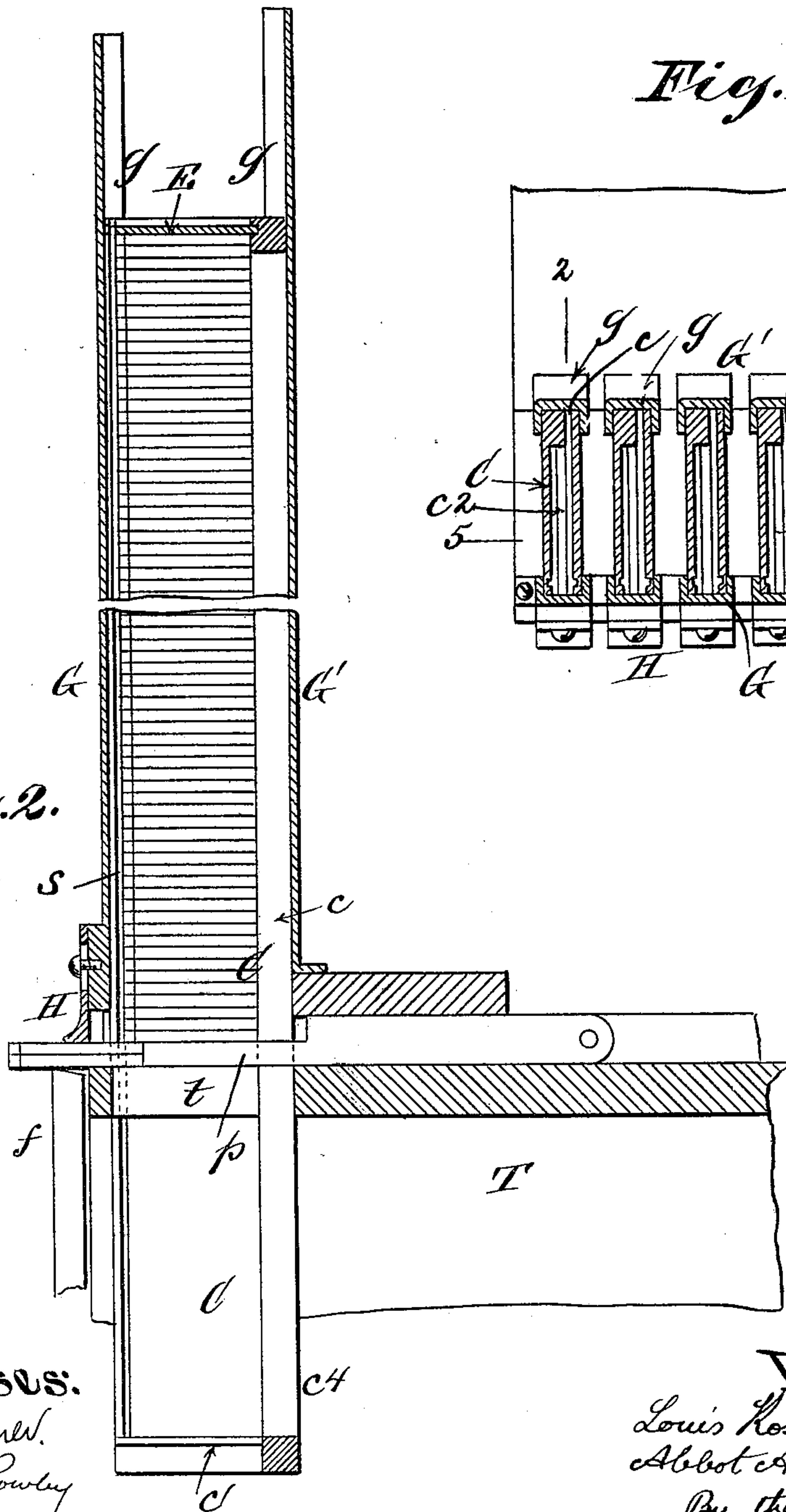


Fig. 2.



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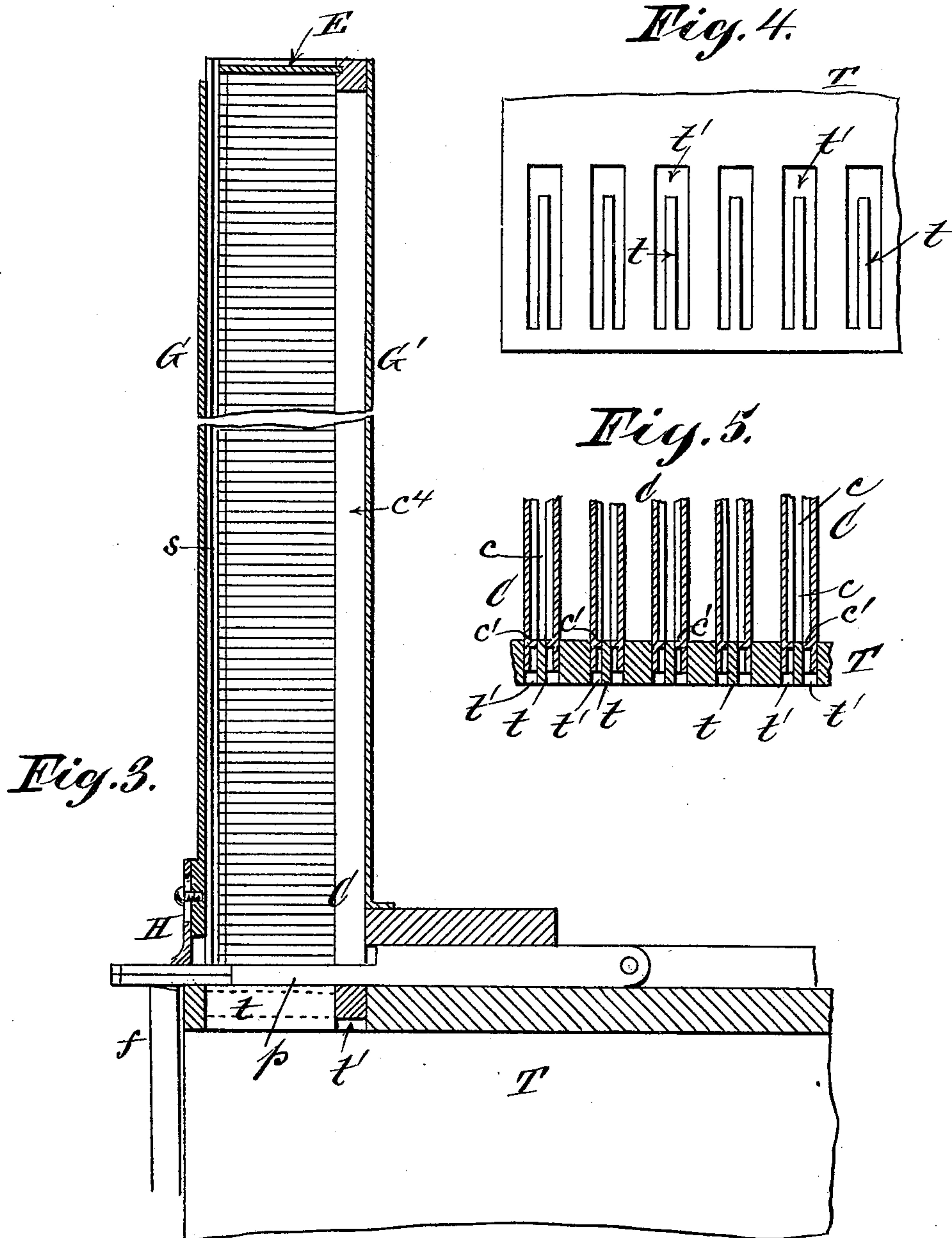
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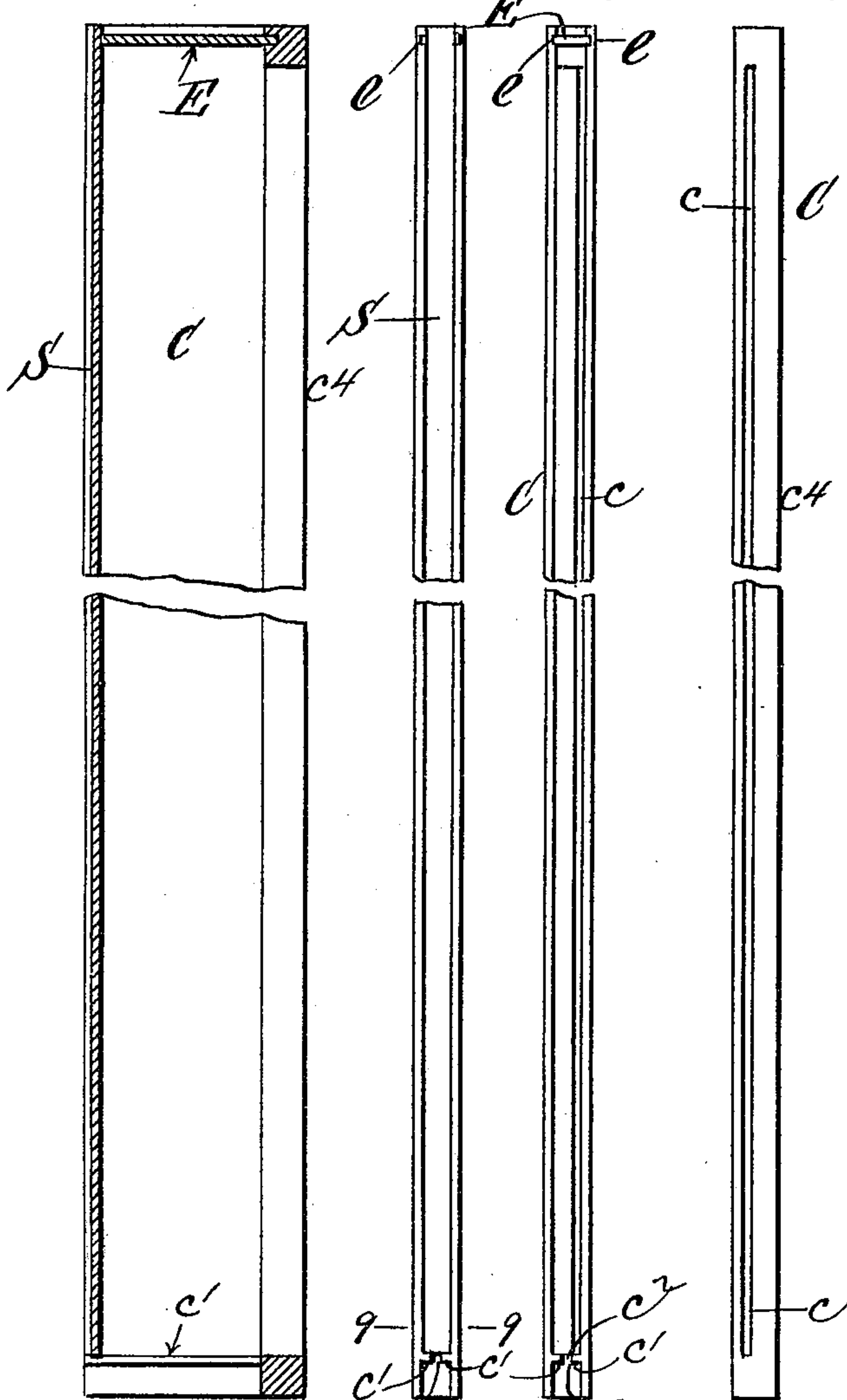
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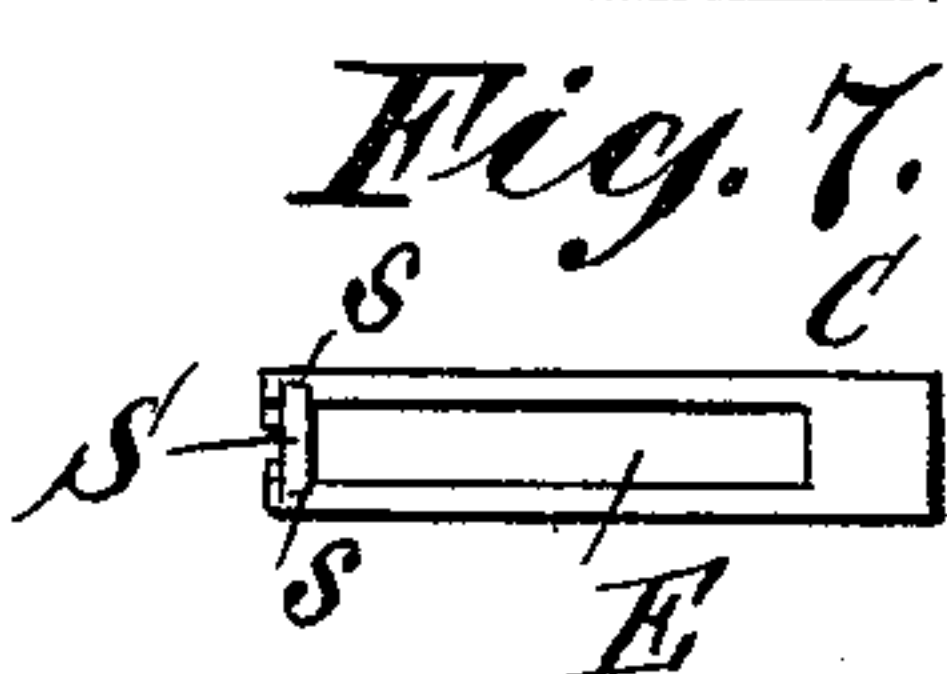
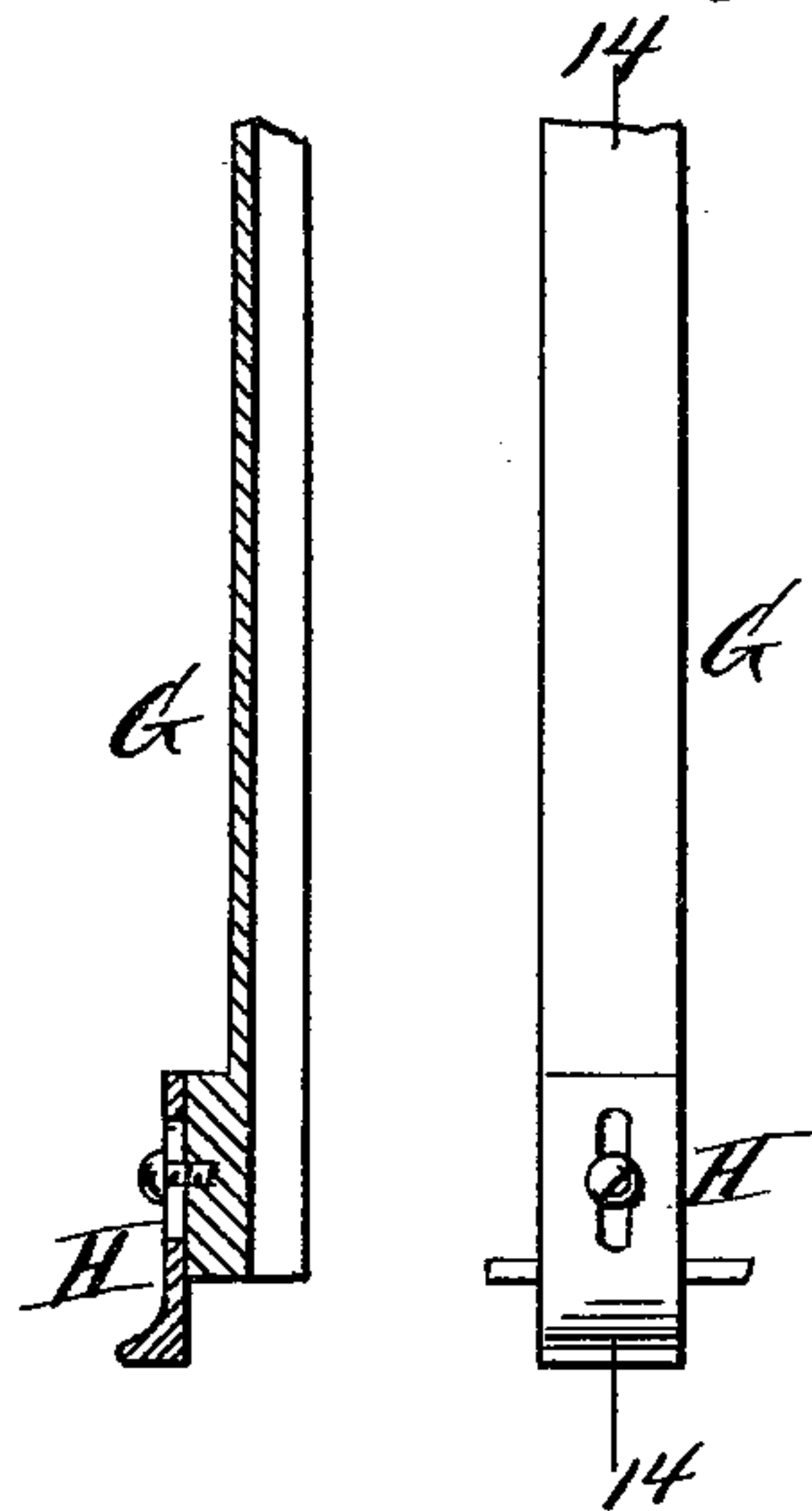
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*Fig. 6 Fig. 8 Fig. 10 Fig. 11.*



*Fig. 14 Fig. 13.*



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# UNITED STATES PATENT OFFICE.

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## TYPE-SETTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 625,931, dated May 30, 1899.

Application filed July 25, 1898. Serial No. 686,871. (No model.)

*To all whom it may concern:*

Be it known that we, LOUIS KOSSUTH JOHNSON and ABBOT AUGUSTUS LOW, citizens of the United States, residing in New York, borough of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Type-Setting Apparatus, of which the following is a specification sufficient to enable others skilled in the art to which the invention appertains to make and use the same.

Our invention relates to compositors' type-cases in which the types are forwarded automatically for removal by hand, substantially as in patents heretofore granted to us.

The distinguishing feature of our present invention consists in supporting the type-channel upon the column of type and so constructing and arranging the parts that the channel itself acts as a follower to the types, descending as they are removed from the lower end of the column and maintaining a uniform pressure upon the column under all conditions, so that the last types in the column are held as steadily in position as the first.

The invention consists in the special features of construction and arrangement of the channel and channel-support, as herein shown and described.

Our invention also includes special means for locking the types in the channel for transportation or storage.

In the accompanying drawings, Figure 1 is a horizontal section through several of our improved channels, showing a plan of a portion of the setter-case. Fig. 2 is a vertical section upon plane of line 2 2, Fig. 1, showing the channels partially lowered. Fig. 3 is a similar view showing the channel full of types. Fig. 4 is a plan of a portion of the upper side of the supporting-bed. Fig. 5 is a section upon plane of line 5 5, Fig. 1. Fig. 6 is a longitudinal section of a channel closed by our front guard. Fig. 7 is a plan of the same. Fig. 8 is a front view of the channel closed; Fig. 9, a transverse section upon plane of line 9 9, Fig. 8. Fig. 10 is a front view of the channel with the front guard removed. Fig. 11 is a rear view of the channel. Fig. 12 is a bottom view of the channel. Fig. 13

is a front view of the lower portion of the front guide. Fig. 14 is a section upon plane of line 14 14, Fig. 13.

The spine of the channel C is formed with a longitudinal slot *c* to admit of the reciprocation of the pusher-blade *p*. This slot *c* extends nearly the whole length of the channel, so as to allow the latter to descend as the types are removed from the lower end of the column. The lower end of the channel is formed internally with the opposed coinciding type-shoulders *c'*, having between them the slot *c<sup>2</sup>* to admit the type-supporting tongue *t* upon the table T between them. The upper end of the channel is formed with the internal grooves *e* for the reception of the end lock E, said lock being inserted after the types have been distributed into the channel. The front edges of the channel are also formed longitudinally with the internal grooves *s* for the reception of the shield S, which is slid into position in front of the type when it is desired to transport them or store them, but which is removed when the channel is inserted in position upon the composition-table T.

As will be seen by reference to Fig. 4, the composition-table T is formed with a series of recesses *t'* around each type-tongue *t*. These recesses *t'* receive the type-channel and allow it to pass either upward or downward. It will be noticed that the space between the inner end of a type-tongue and the rear of the recesses *t'* is sufficient to admit the spine *c<sup>4</sup>* of the channel.

The channel is supported laterally in position upon the composition-table by front and rear guides G G', attached to the table or framework. These guides G G' are formed with flanges *g*, which clasp the front and rear edges of the channel, as will be seen clearly by reference to Fig. 1. The lower end of the front guide G is provided with the adjustable heel-plate H, which acts in conjunction with the type-finger *f* below, through the medium of which the automatic forwarding mechanism is actuated, as heretofore.

A channel full of types is taken, after the removal of the front shield S, and inserted between the front and rear guides G G', being lowered until the types rest on the shoul-



ders  $c'$  and also rest upon the type-tongue  $t'$ , the pusher being retracted during each operation, so as to allow the lower end of the spine  $c^4$  of the channel C to pass said type-tongue, 5 the type-forwarding mechanism being now set in motion to forward one or more types, as the case may be. As the types are forwarded they are removed from time to time, lowering the column. The channel C by 10 reason of the bearing of its end lock E upon the top of the channel descends, acting as a follower and maintaining the remaining types steadily in position until the last.

What we claim as our invention, and desire 15 to secure by Letters Patent, is—

1. The type-channel C, formed with the longitudinal slot  $c$ , in its spine, and with the internal type-shoulders  $c'$ , and slot  $c^2$ , for the purpose and substantially in the manner de- 20 scribed.

2. In combination with the channel C, formed with the longitudinal slot  $c$ , in its spine, with the type-shoulders  $c'$ , and slot  $c^2$ , and with the internal grooves  $e$ , the end lock 25 E, arranged and operating substantially in the manner and for the purpose described.

3. The combination of the channel C, formed with the longitudinal slot  $c$ , in its spine, and having the internal type-shoulders  $c'$ , and slot  $c^2$ , the end lock E, and the front shield S, sub- 30 stantially in the manner and for the purpose described.

4. The combination of the channel C, formed with the longitudinal slot  $c$ , in its spine, and with the internal type-shoulders  $c'$ , and slot  $c^2$ , 35 the end lock E, and the composition-table T, formed with the recesses  $t'$ , and type-tongues  $t$ , for the purpose and substantially in the manner described.

5. The combination of the type-channel C, 40 formed with the longitudinal slot  $c$ , in its spine, and having the internal type-shoulders  $c'$ , and slot  $c^2$ , the end lock E, the table T, formed with the recesses  $t'$ , and type-tongue  $t$  and the front and rear guides G, G', 45 the whole arranged and operating substantially in the manner described.

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