

(No Model.)

5 Sheets—Sheet 1.

L. K. JOHNSON & A. A. LOW.

TYPE SETTING APPLIANCE.

No. 570,098.

Patented Oct. 27, 1896.

Fig. 1.

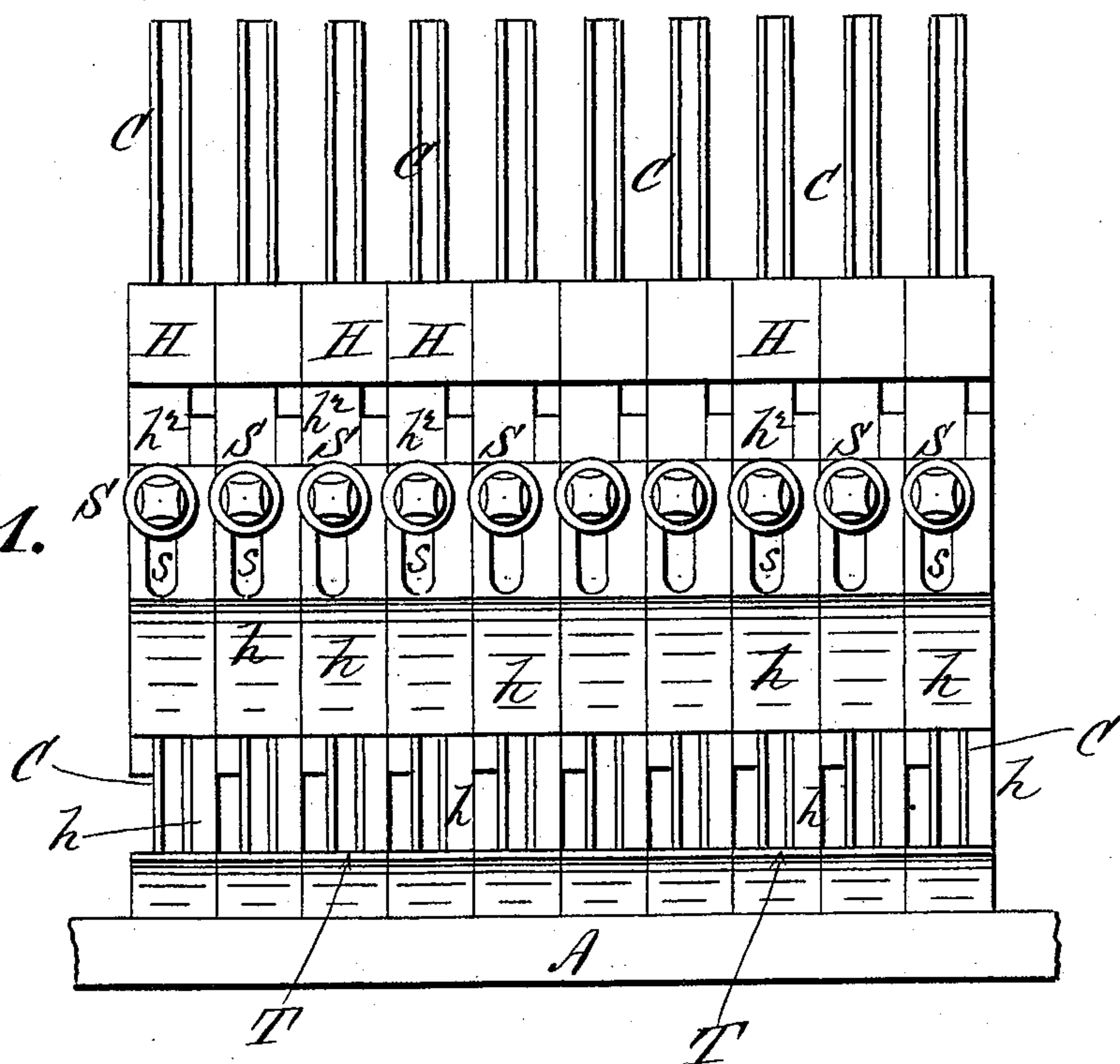
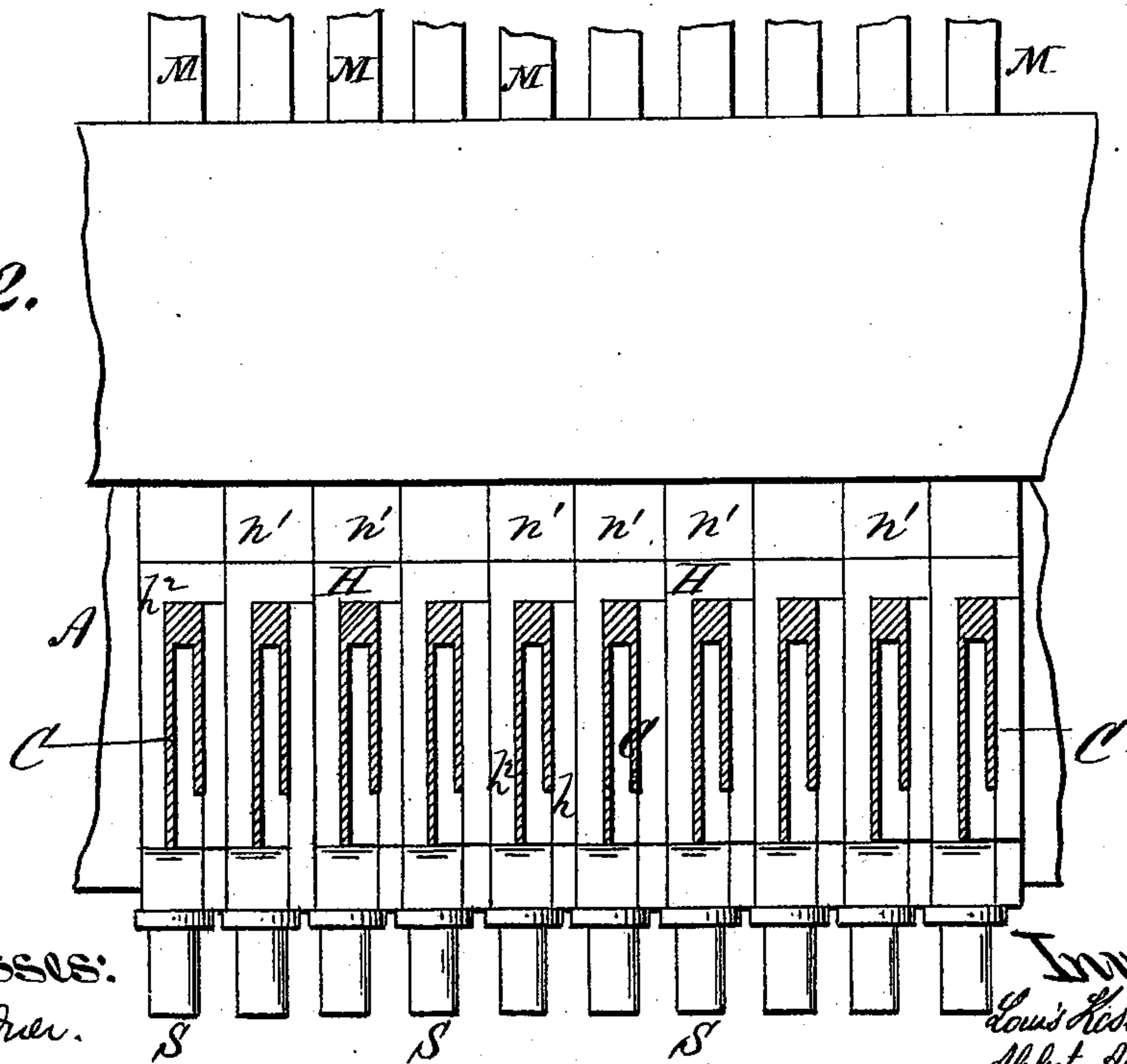


Fig. 2.



Witnesses:

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M. J. Almon

Inventors:

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Abbot Augustus Low  
By their Attorney,  
George William Smith

(No Model.)

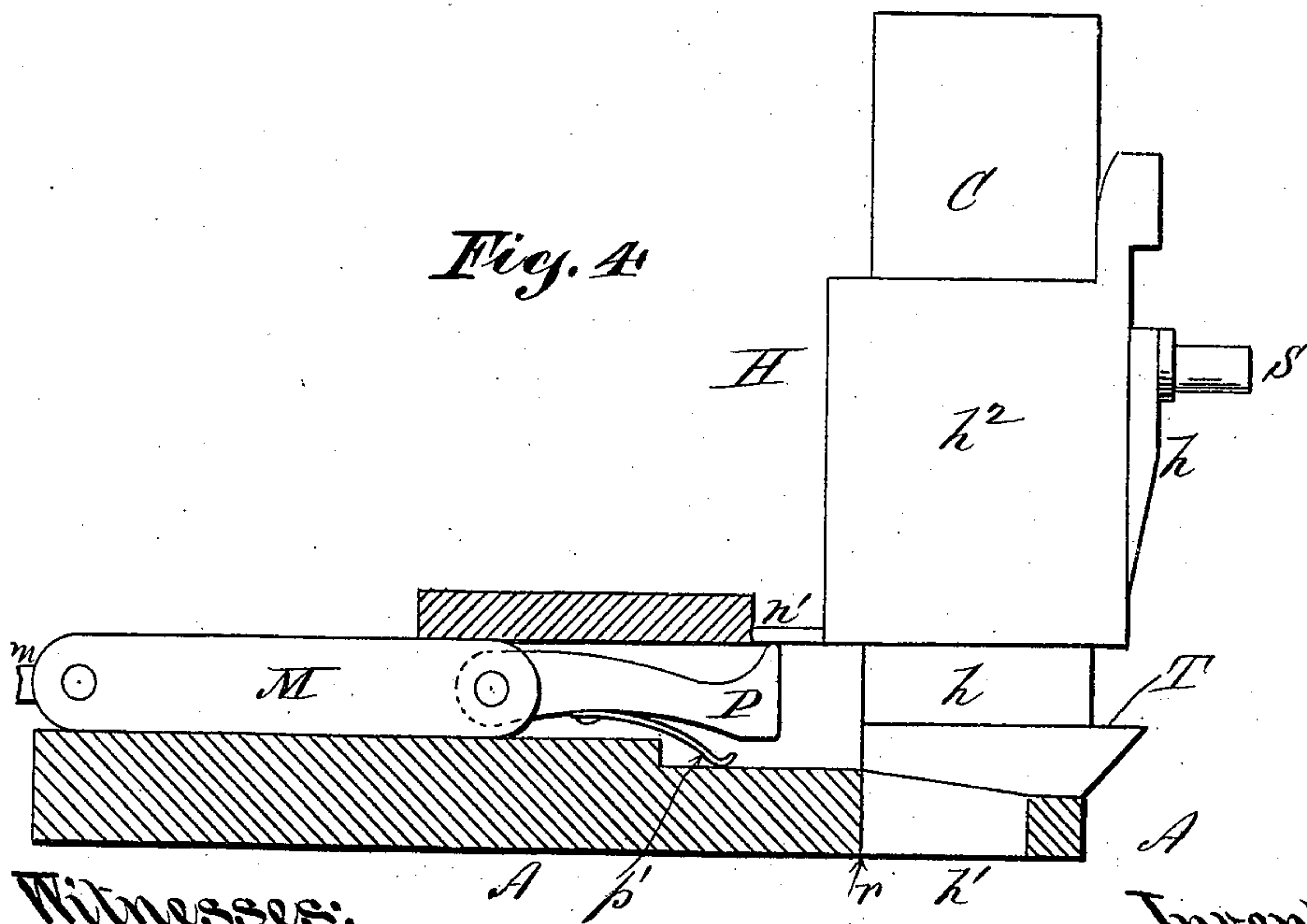
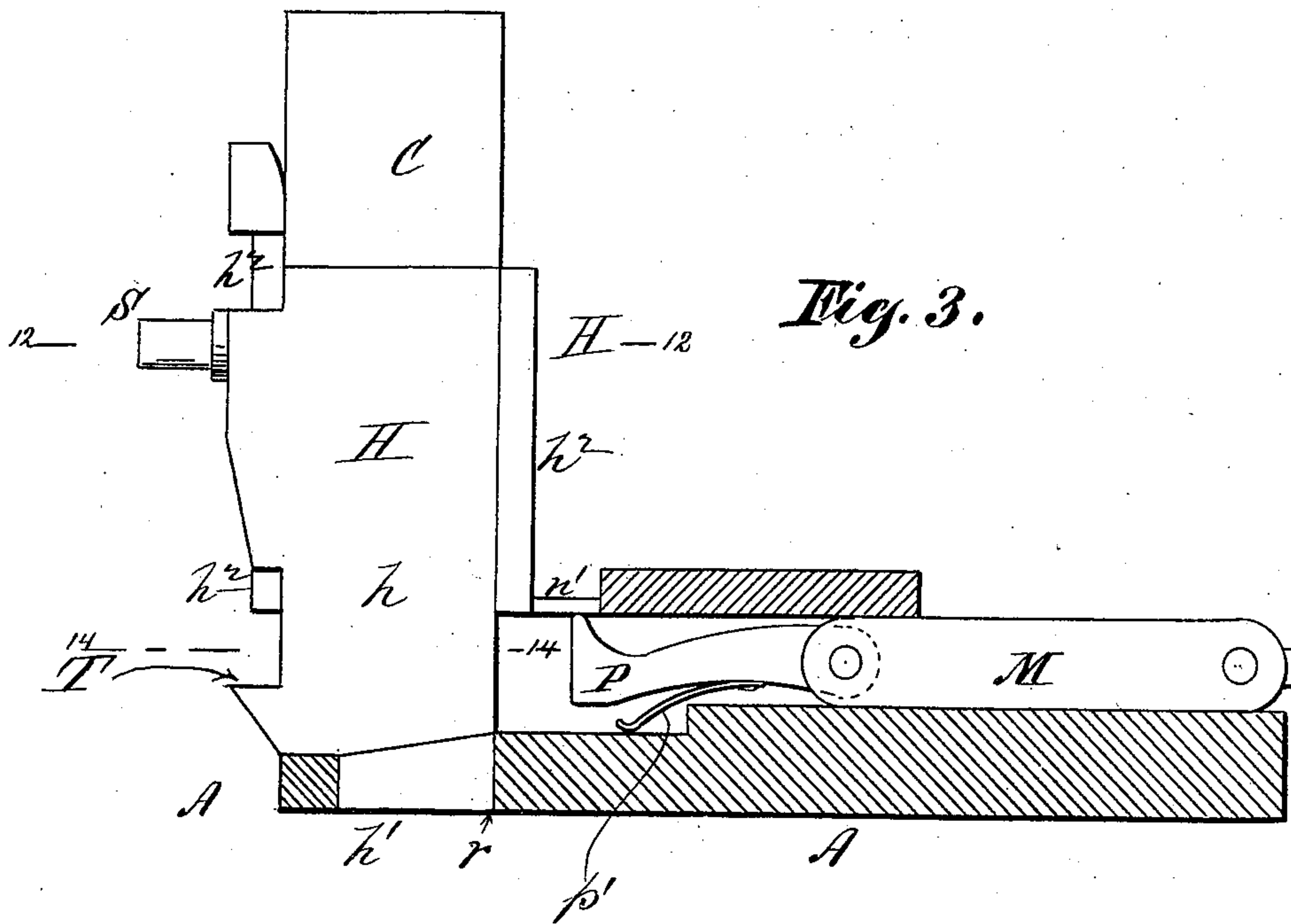
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L. K. JOHNSON & A. A. LOW.

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5 Sheets—Sheet 3.

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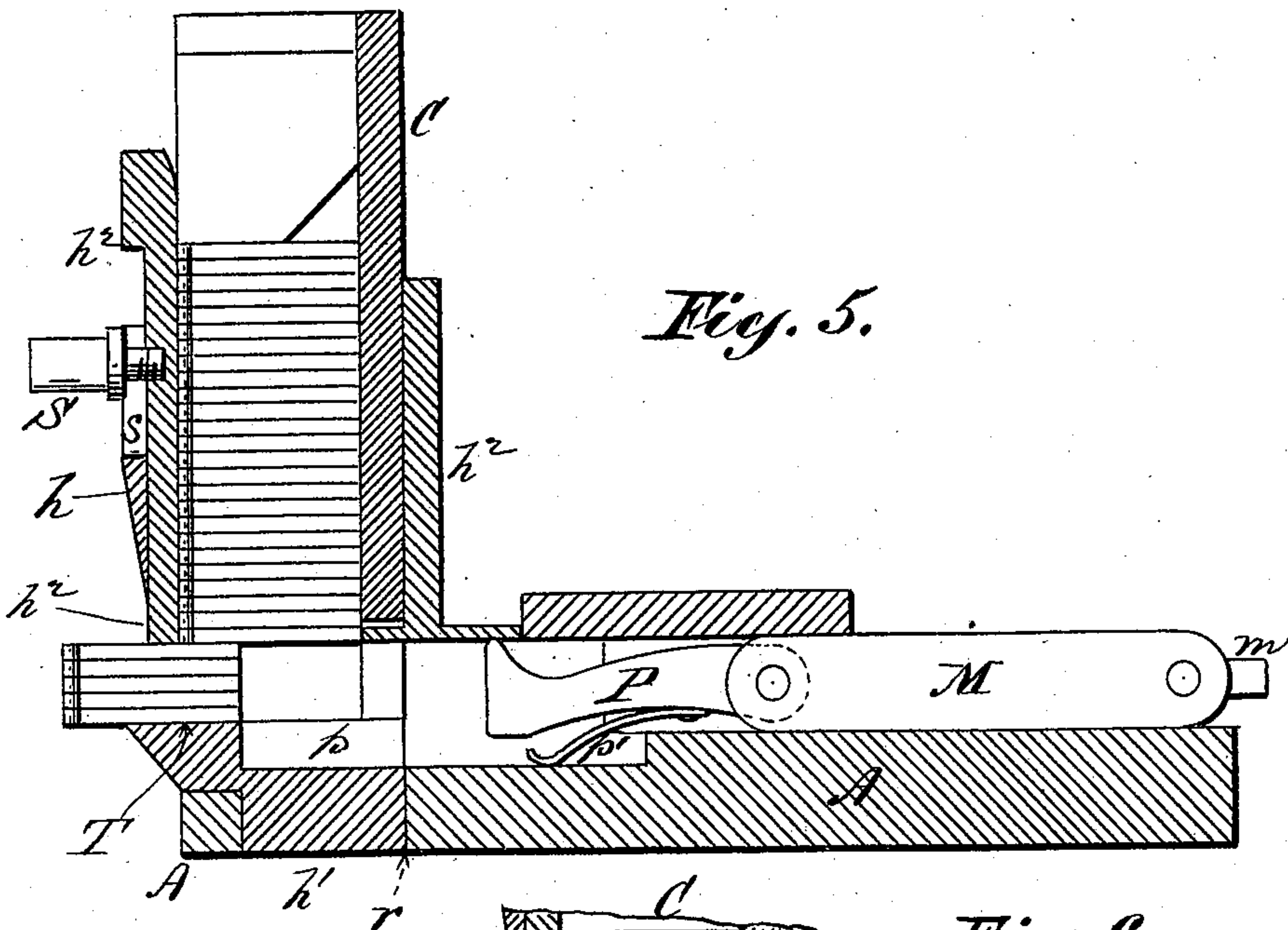


Fig. 5.

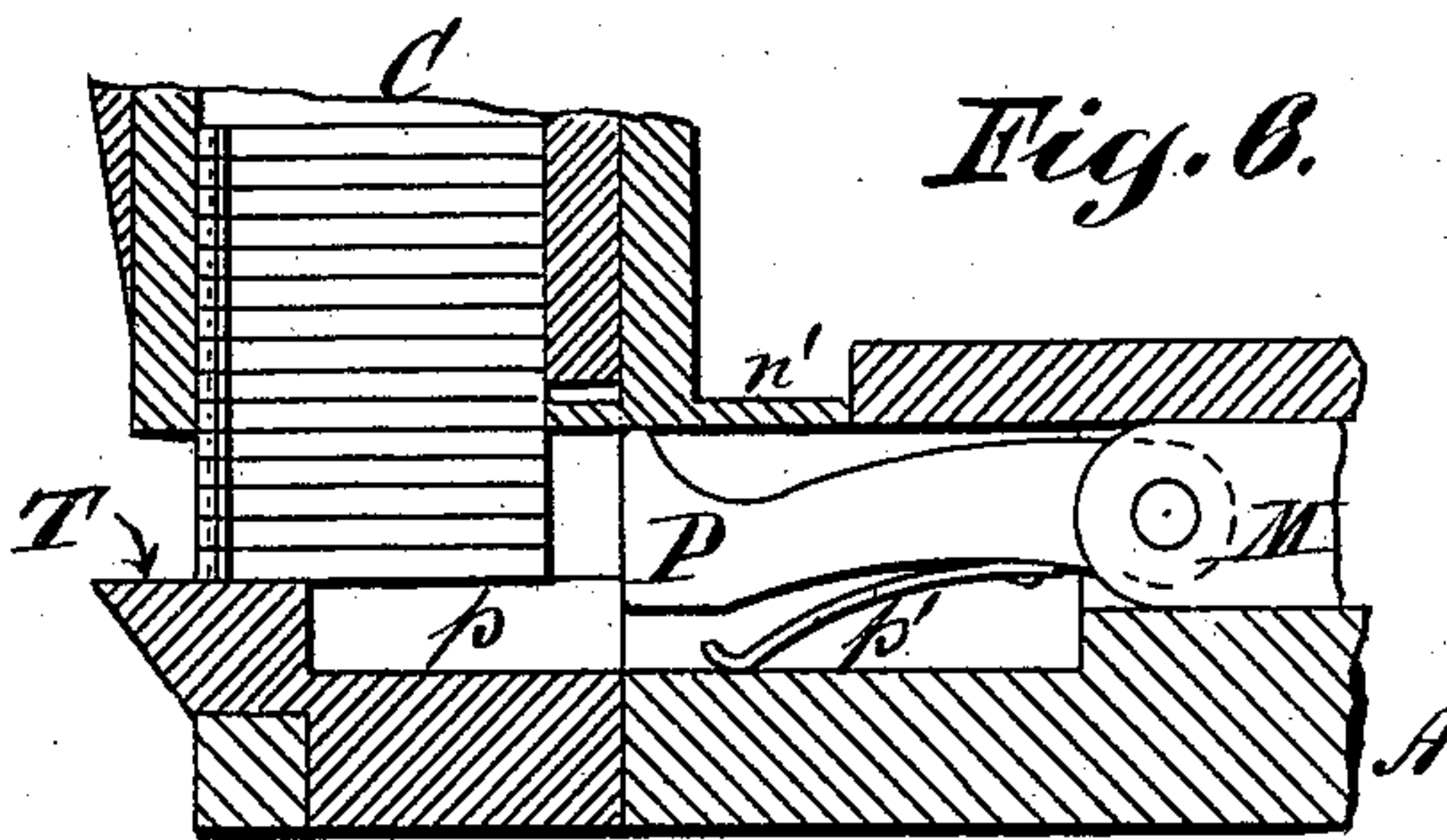


Fig. 6.

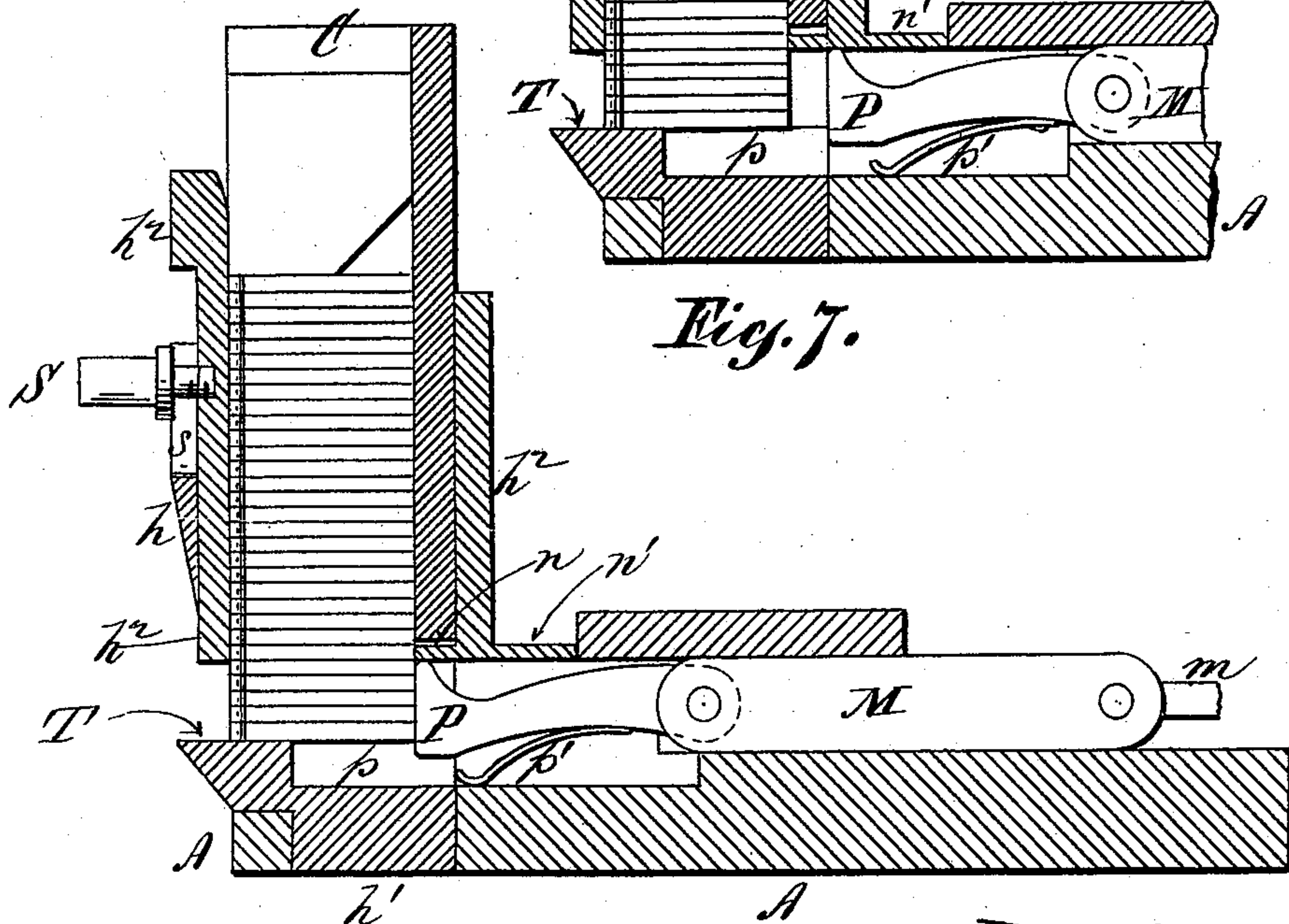


Fig. 7.

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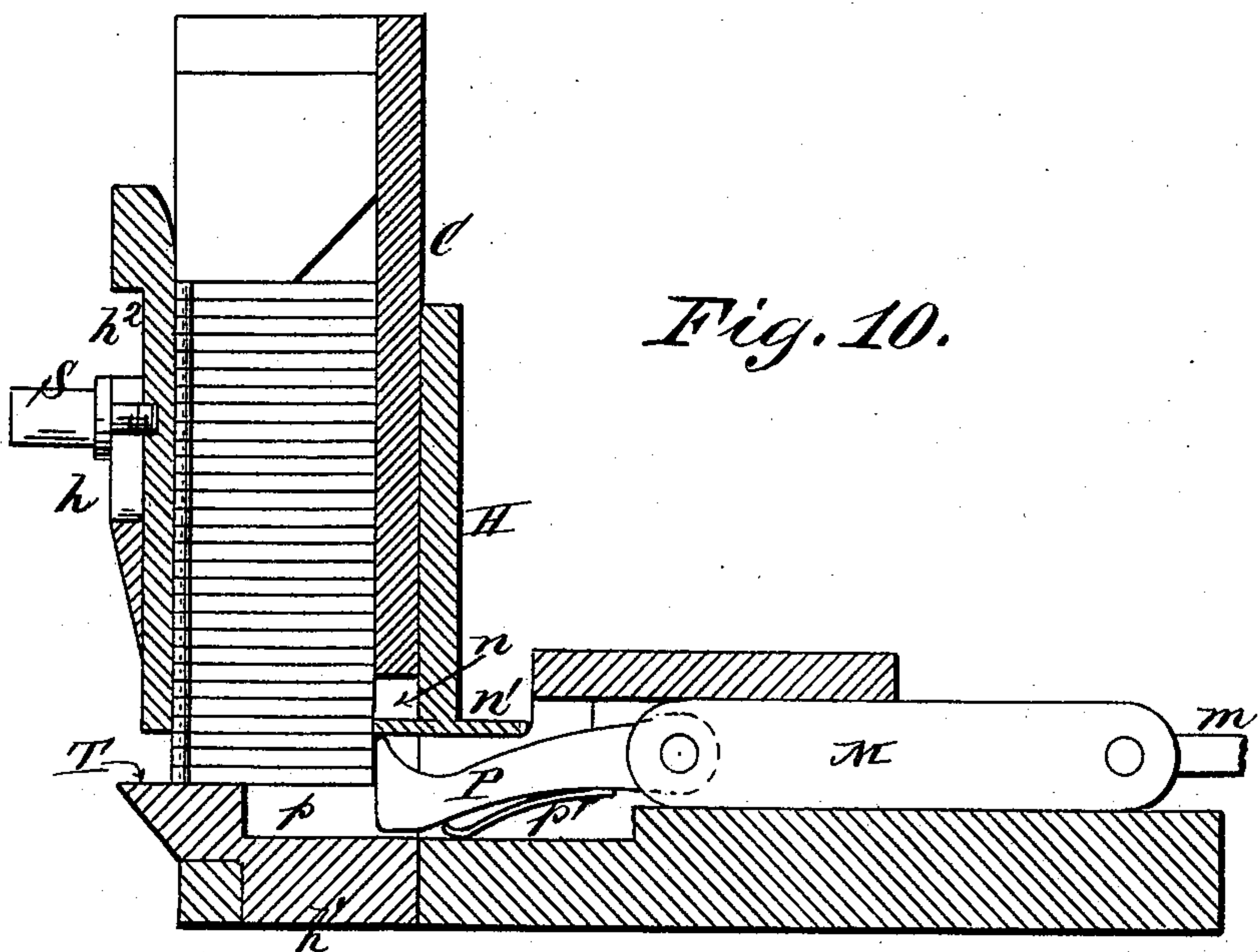
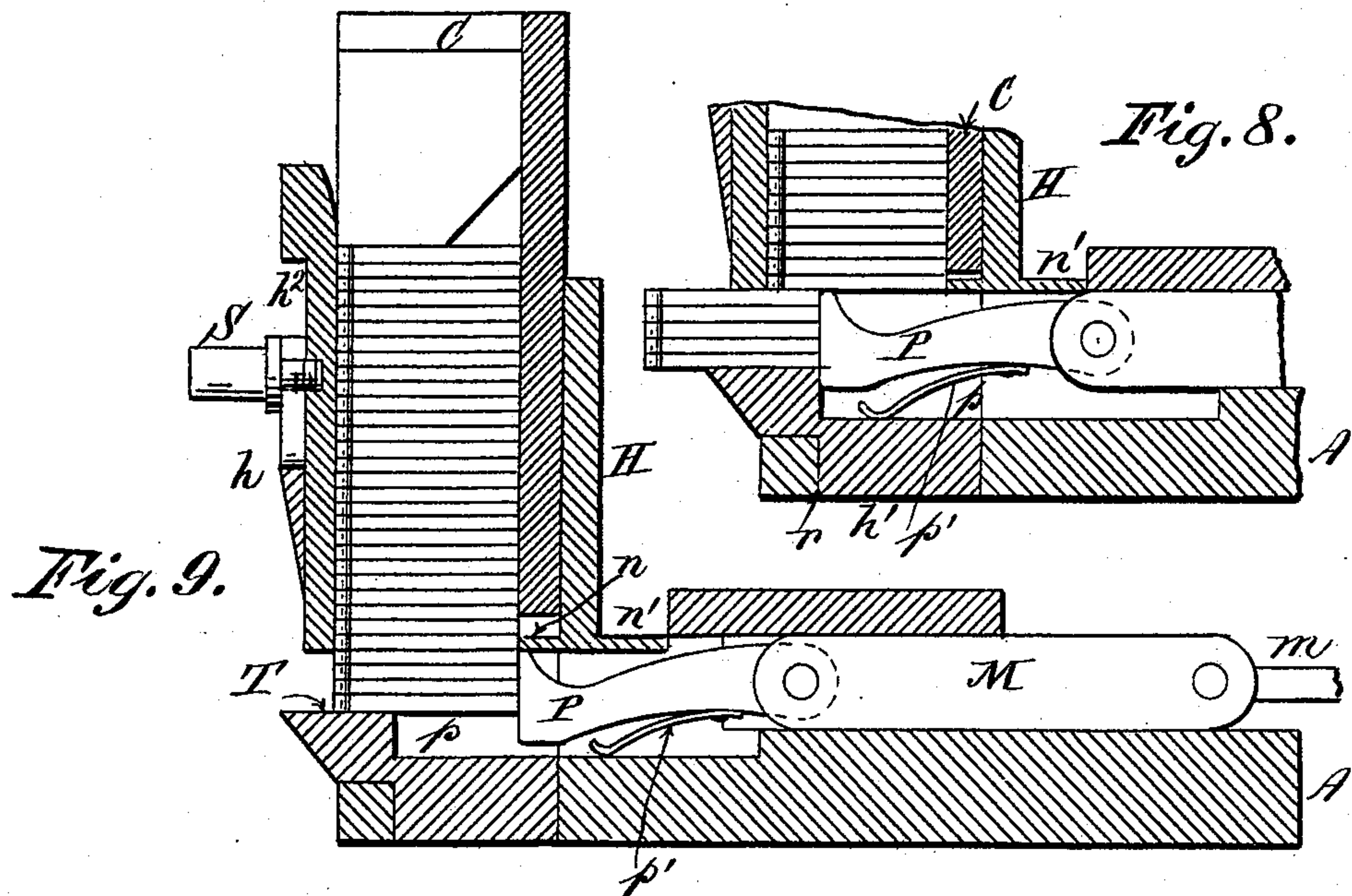
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Patented Oct. 27, 1896.



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(No Model.)

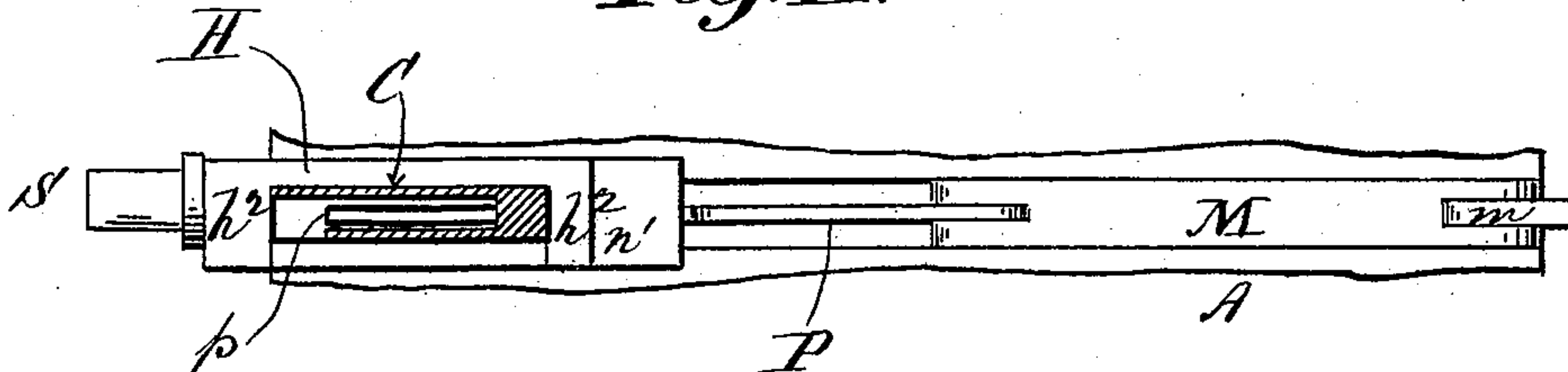
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TYPE SETTING APPLIANCE.

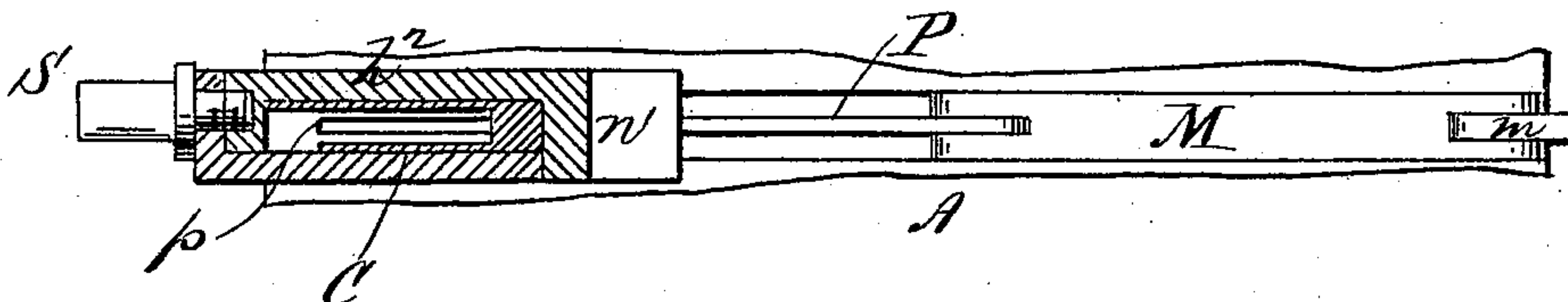
No. 570,098.

Patented Oct. 27, 1896.

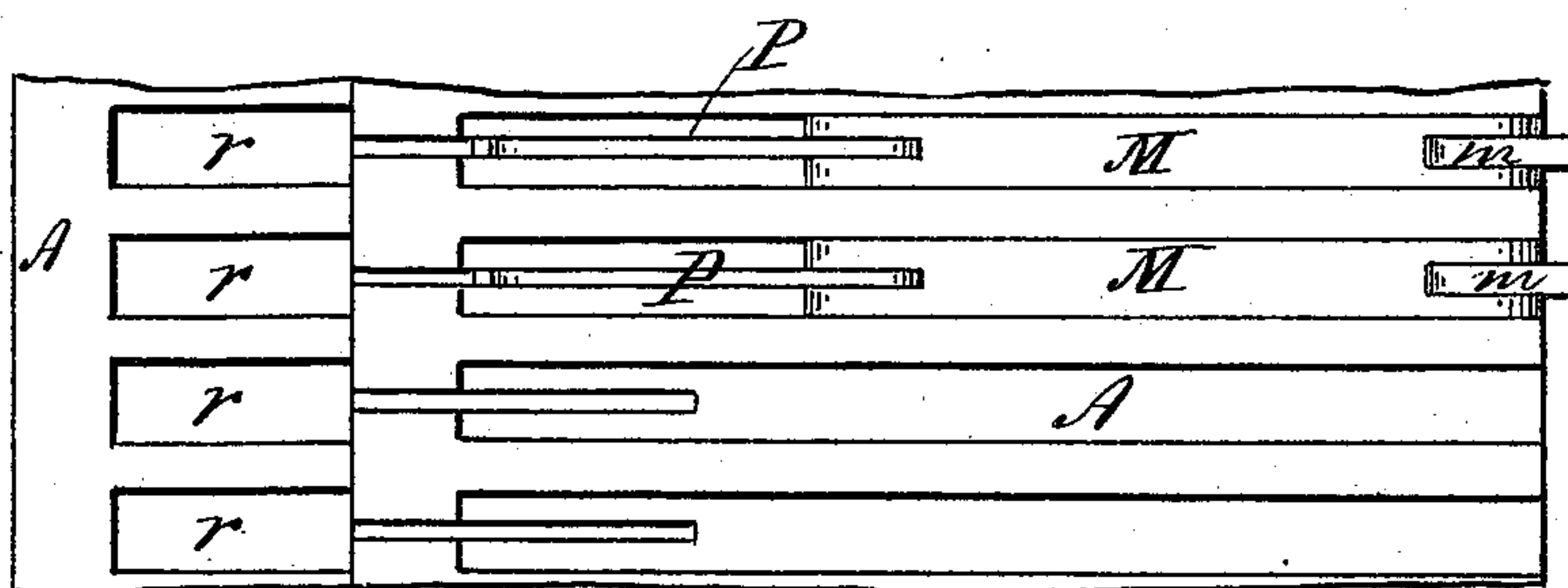
*Fig. 11.*



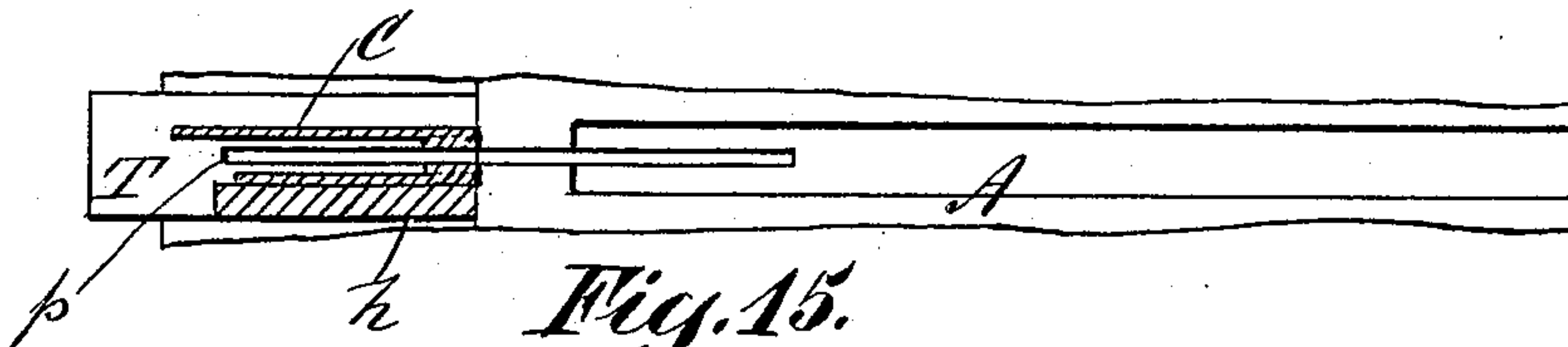
*Fig. 12.*



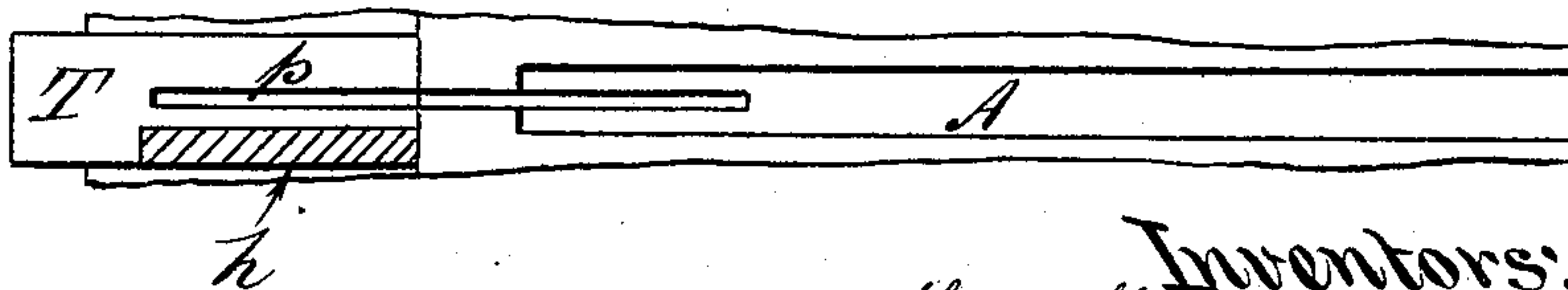
*Fig. 13.*



*Fig. 14.*



*Fig. 15.*



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# UNITED STATES PATENT OFFICE.

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NEW YORK, N. Y.

## TYPE-SETTING APPLIANCE.

SPECIFICATION forming part of Letters Patent No. 570,098, dated October 27, 1896.

Application filed March 11, 1896. Serial No. 582,713. (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 the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Type-Setting Appliances, 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 improvements relate to the form of type-setting case designated as the "word-case," in which several letters or characters constituting a word or combination are simultaneously forwarded and removed, as in our application, Serial No. 577,440, filed January 30, 1896.

Heretofore we have provided means for adjusting the channels and holders so that the number of types to be removed together might be varied, pusher-blades of different height being substituted one for the other when a change in the distance was made.

By our present invention we obviate the necessity of changing the pusher and render the latter automatically adjustable to conform to the size and length of the word or combination to be detached and forwarded.

The invention consists, primarily, in a pivoted pusher-blade which tends automatically to follow the adjustment of the plate by which the types are confined in the channel, and, secondarily, in the special combination and arrangement of parts hereinafter described.

In the accompanying drawings, Figure 1 is a front view of a series of channels and holders constituting part of a case and constructed according to our invention. Fig. 2 is a plan of the same. Fig. 3 is a vertical section of the supporting-bed, showing the right-hand side of the holder, channel, pusher, &c., in elevation. Fig. 4 is a similar view taken from the left-hand side. Fig. 5 is a sectional elevation showing the parts at rest; Fig. 6, a similar view showing the pusher partially advanced and the descent of the type before it reaches them. Fig. 7 is a similar view showing the pusher advanced into contact with the heels of the type. Fig. 8 is a similar view

showing the pusher at the forward end of its stroke. Fig. 9 is a sectional view illustrating the adjustment of the parts for the removal of four types; Fig. 10, a similar view showing the adjustment of the parts for the removal of three types. Fig. 11 is a plan of a single holder and pusher; Fig. 12, a horizontal section upon plane of line 12 12, Fig. 3; Fig. 13, a plan of the bed-plate or support, showing two of the pushers in position, the other parts being removed. Fig. 14 is a section upon line 14 14, Fig. 3. Fig. 15 is a similar view, the channel being omitted.

The type-containing channels C are supported in holders H, which latter are substantially the same in construction as those described in our last application filed, consisting, essentially, of a standard-plate *h*, having a tenon *h'* fitting into recesses *r* in the shelf or support A, and supporting an adjustable side plate *h<sup>2</sup>* by means of a set-screw S, operating through a vertical slot *s*.

The lower part of the standard-plate *h* is formed with a type-platform T. The lower end of the channel rests on this type-platform, as do also the types. The spine of the channel is slotted at its lower end for a distance equal to or greater than the combined thickness of the greatest number of types to be removed at one time.

The pusher consists of a comparatively thin blade P, pivoted at its rear end to a carrier M, which is connected by a pitman *m* with any suitable reciprocating mechanism. This pusher P is of less thickness than the width of the type, and the rear part of the type-platform T is slotted to receive it, but affords support on either side of the slot *t* to the lowest type.

The adjustable side plate *h<sup>2</sup>* acts as a gage-plate to regulate the number of types to be removed from the channel, as heretofore, the difference in the present case being that at its rear it is formed with a front extension *n*, entering the slot in the spine of the channel, and with a rear extension *n'* for controlling the forward end of the pusher P, which latter is forced upward against the guard by a spring *p'* or equivalent means.

The operation will be readily understood



by reference to the figures in the drawings, illustrating the successive positions of the pusher. In its retracted position the forward end of the pusher is some distance behind the type-containing channel, as shown in Fig. 5, so that upon the removal of the types already advanced the column will have time to descend before the front of the pusher reaches the rear of the types, as illustrated in Figs. 6 and 7.

In Figs. 9 and 10 the parts are shown as adjusted for the removal of a lesser number of types, and it will be seen that this adjustment of the gage-plate forces down the pusher P into a corresponding position, so that only one adjustment is necessary.

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

1. The combination with a type-channel and type-support of a pusher adjustable with relation to the number of types to be removed from the channel, substantially in the manner and for the purpose described.

2. The combination with a type channel and holder, and with a type-supporting platform, of a pusher which adjusts itself automatically to the number of types to be used in the channel, substantially in the manner and for the purpose described.

3. The combination of a type-containing channel, a channel-holder, a type-supporting platform, an upper guard adjustable with relation to the said type-supporting platform for the purpose of controlling the number of types to be removed from the channel, and an automatically-adjustable pusher controlled

by said adjustable guard, substantially in the manner and for the purpose described.

4. The combination of a type-containing channel having the lower end of its spine cut away, a channel-holder, an adjustable guard on said channel-holder having a lateral projection into the slot in the spine of the channel for the purpose of guiding the automatically-adjustable pusher accurately to the heels of the types, said automatically-adjustable pusher, and the type-supporting platform, the whole arranged and operating substantially in the manner and for the purpose described.

5. The combination with the type-channel, channel-holder, type-platform and automatically-adjustable pusher of an adjustable guard upon the holder having a horizontal extension into the channel in one direction and a horizontal extension in the opposite direction for controlling the automatically-adjustable pusher, substantially in the manner and for the purpose described.

6. The combination with the type-containing channel, channel-holder, type-platform, an adjustable gage for regulating the removal of the type by means of a horizontal surface, of the pivoted pusher held in contact with said adjustable gage by means of spring-pressure, substantially in the manner and for the purpose described.

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Witnesses:

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