

No. 711,779.

Patented Oct. 21, 1902.

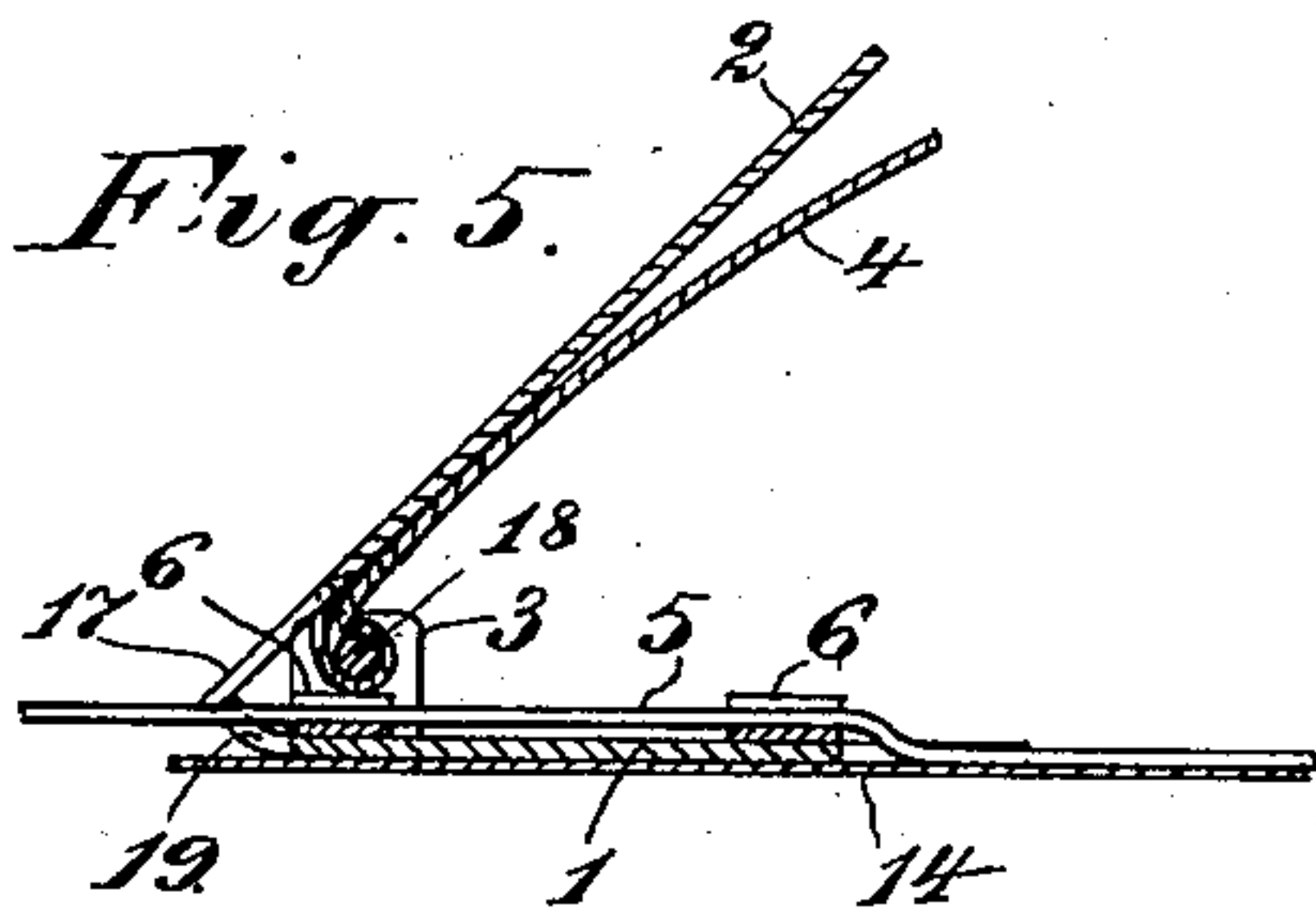
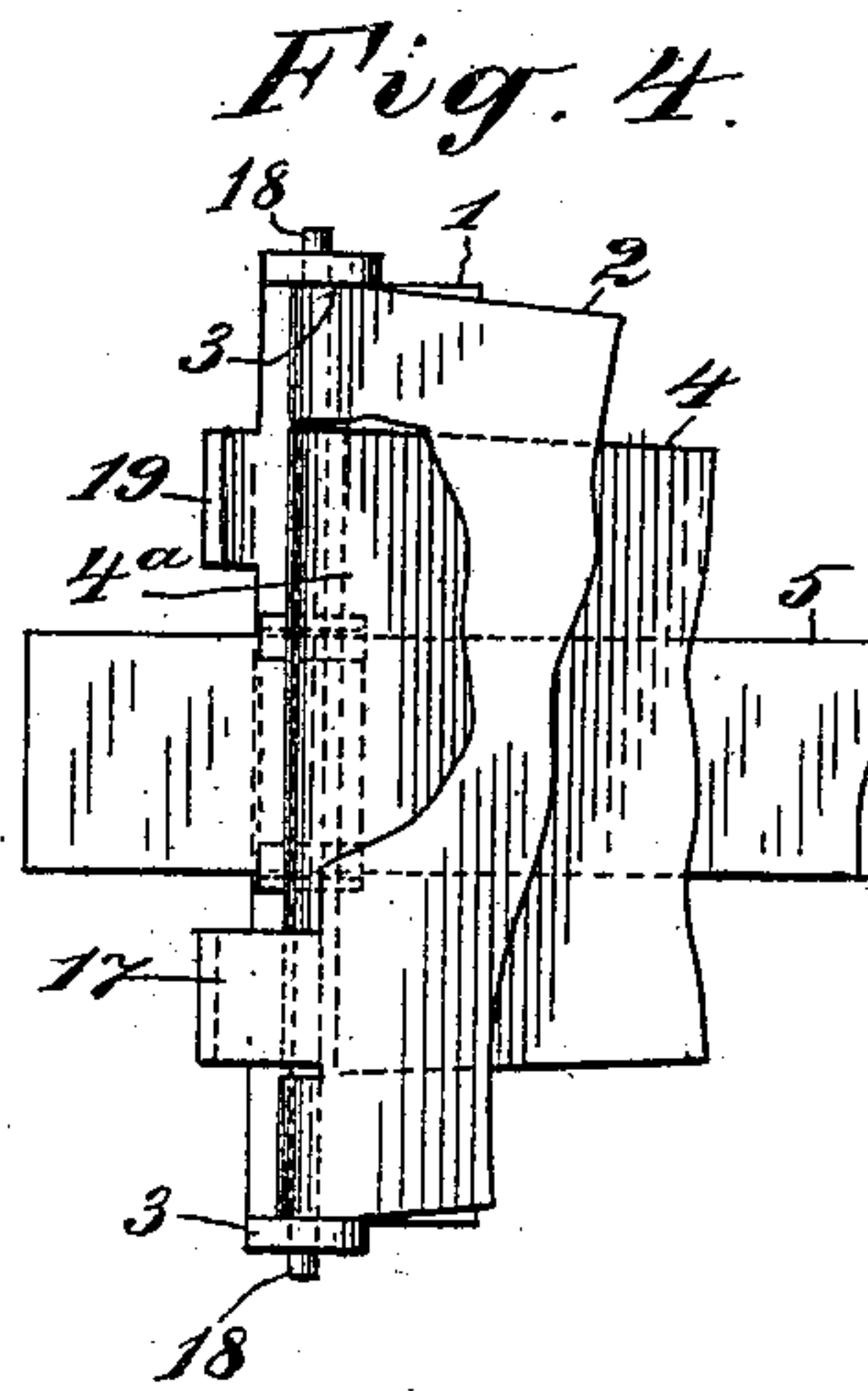
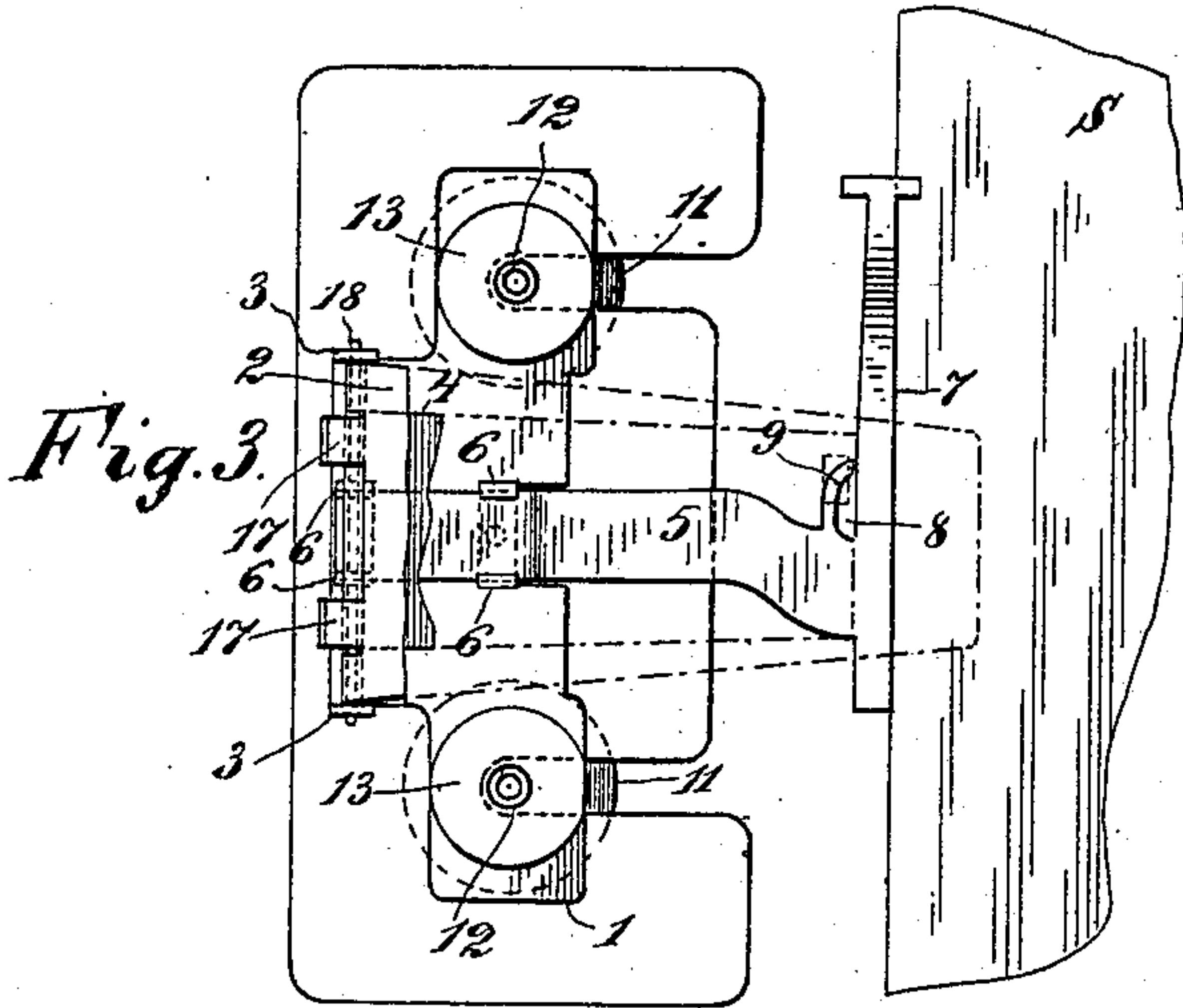
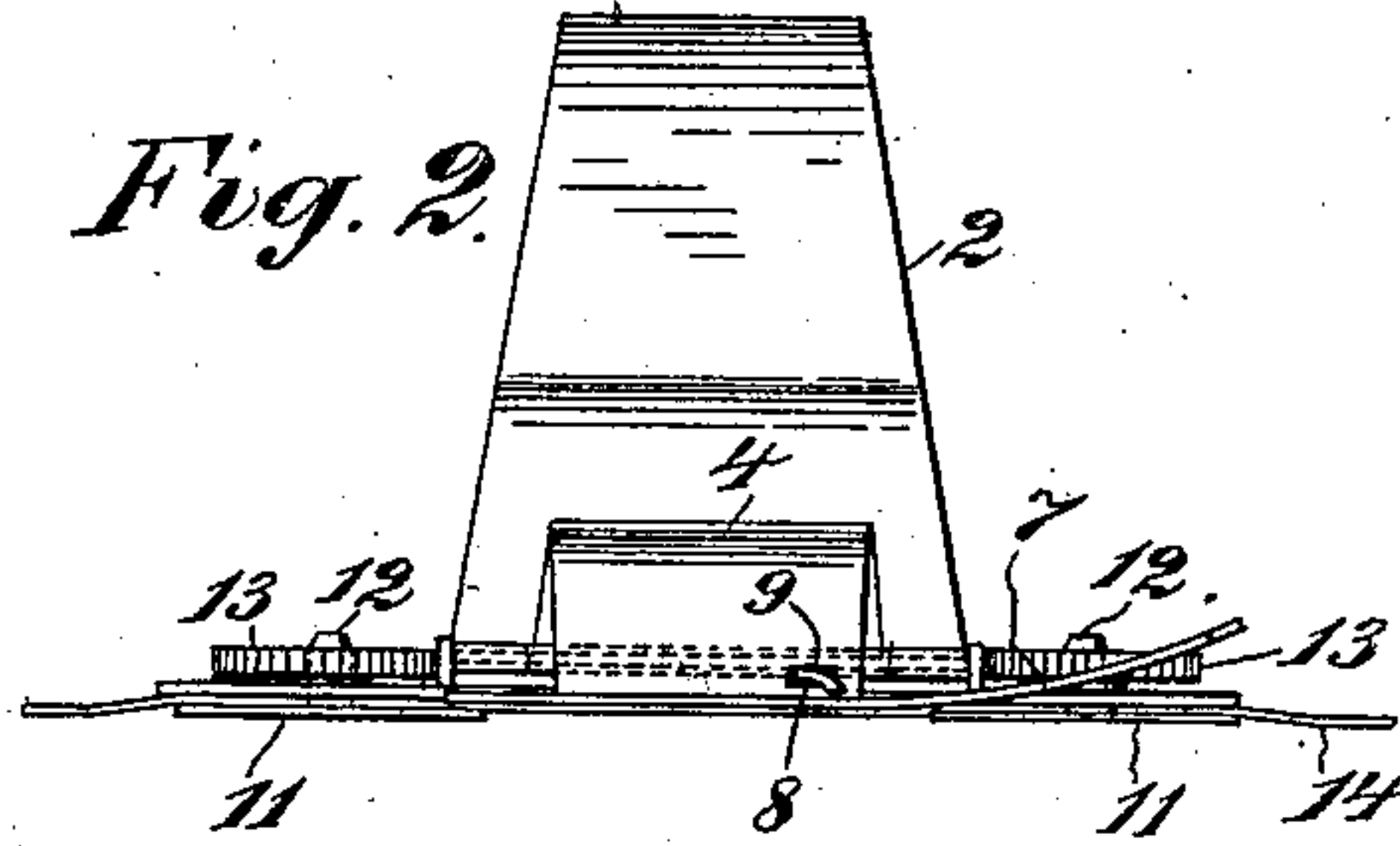
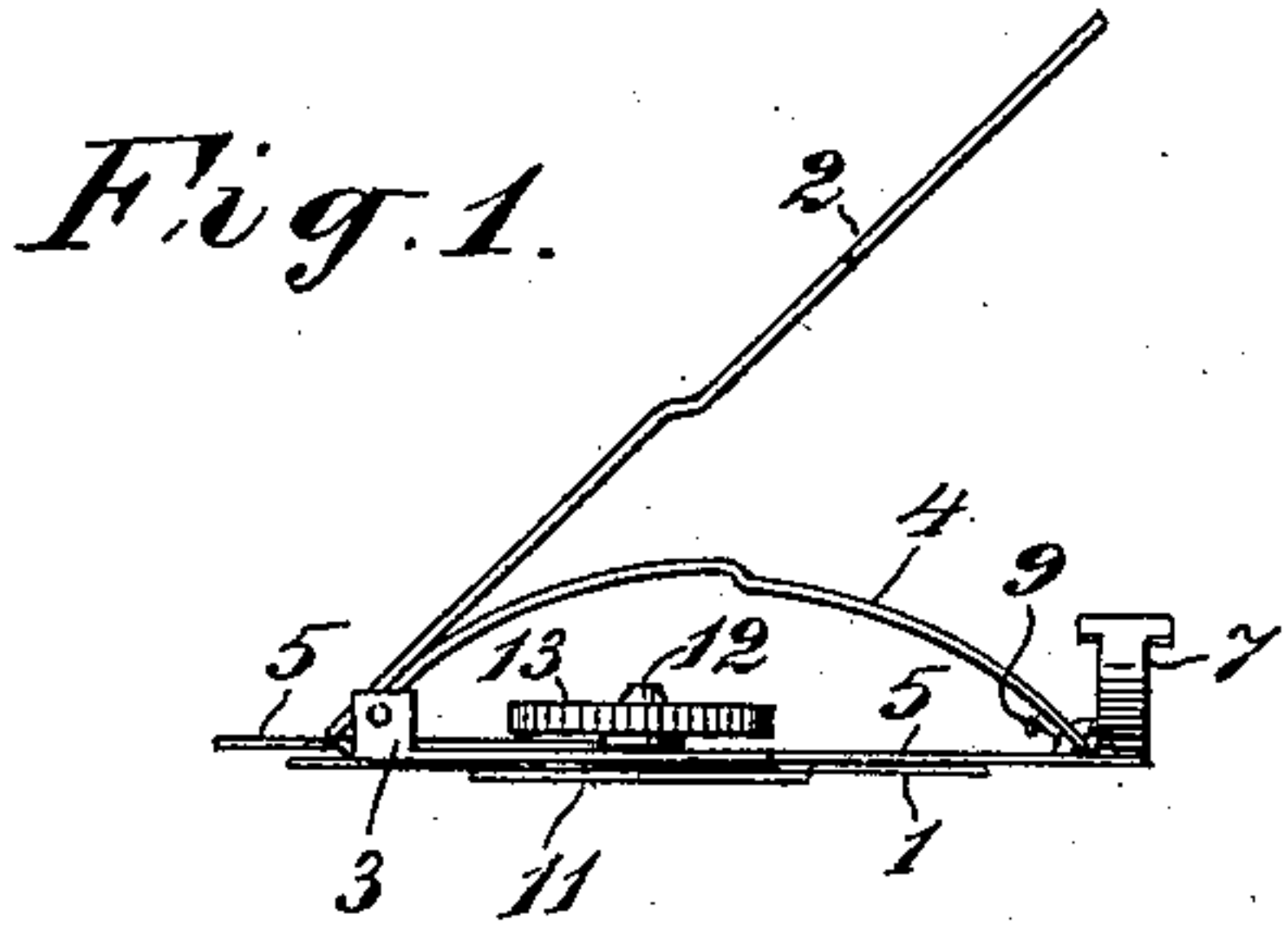
E. L. MEGILL.

FEED GAGE FOR PRINTING PRESSES.

(Application filed Oct. 3, 1901.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

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(No Model.)

2 Sheets—Sheet 2.

Fig. 10.

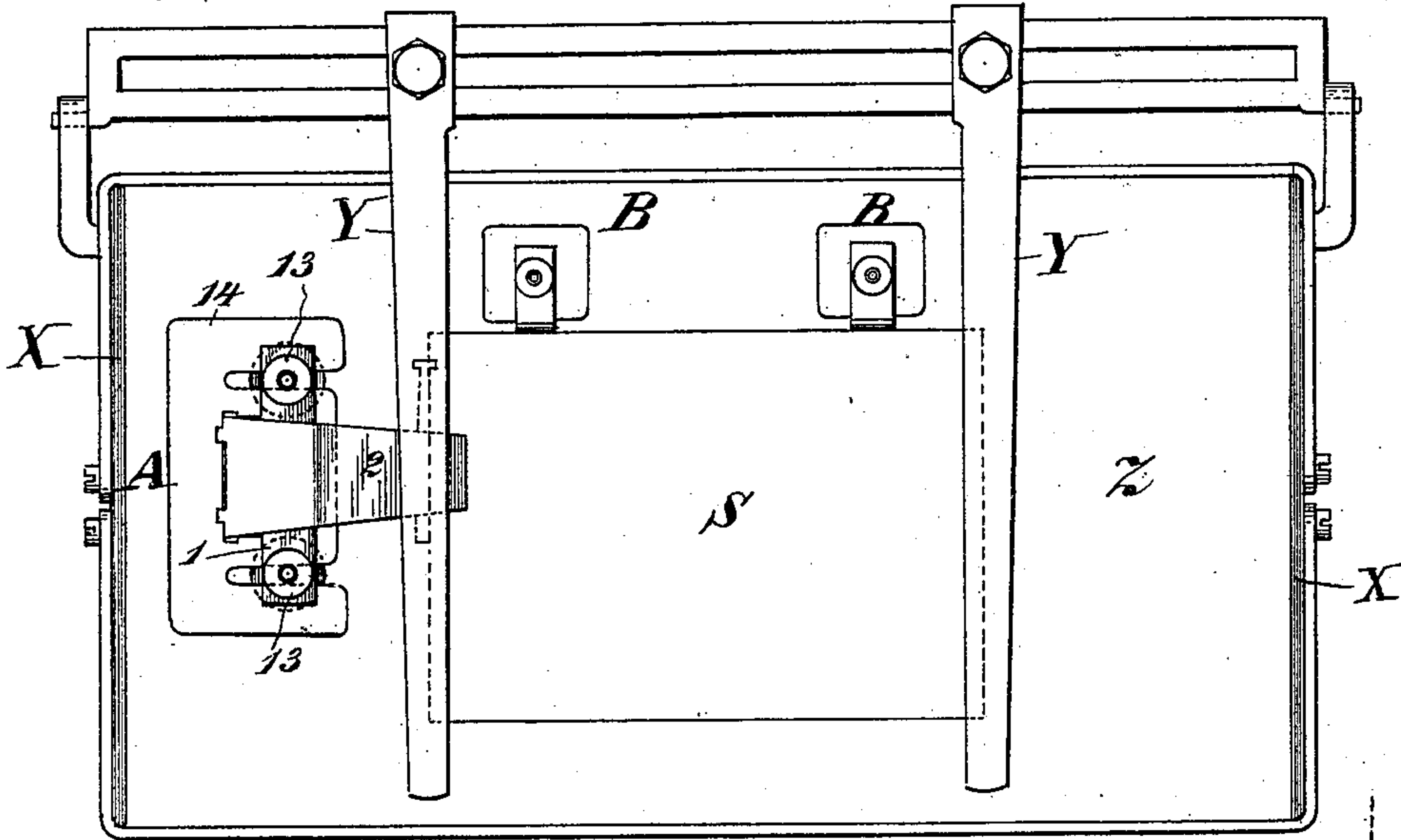


Fig. 6.

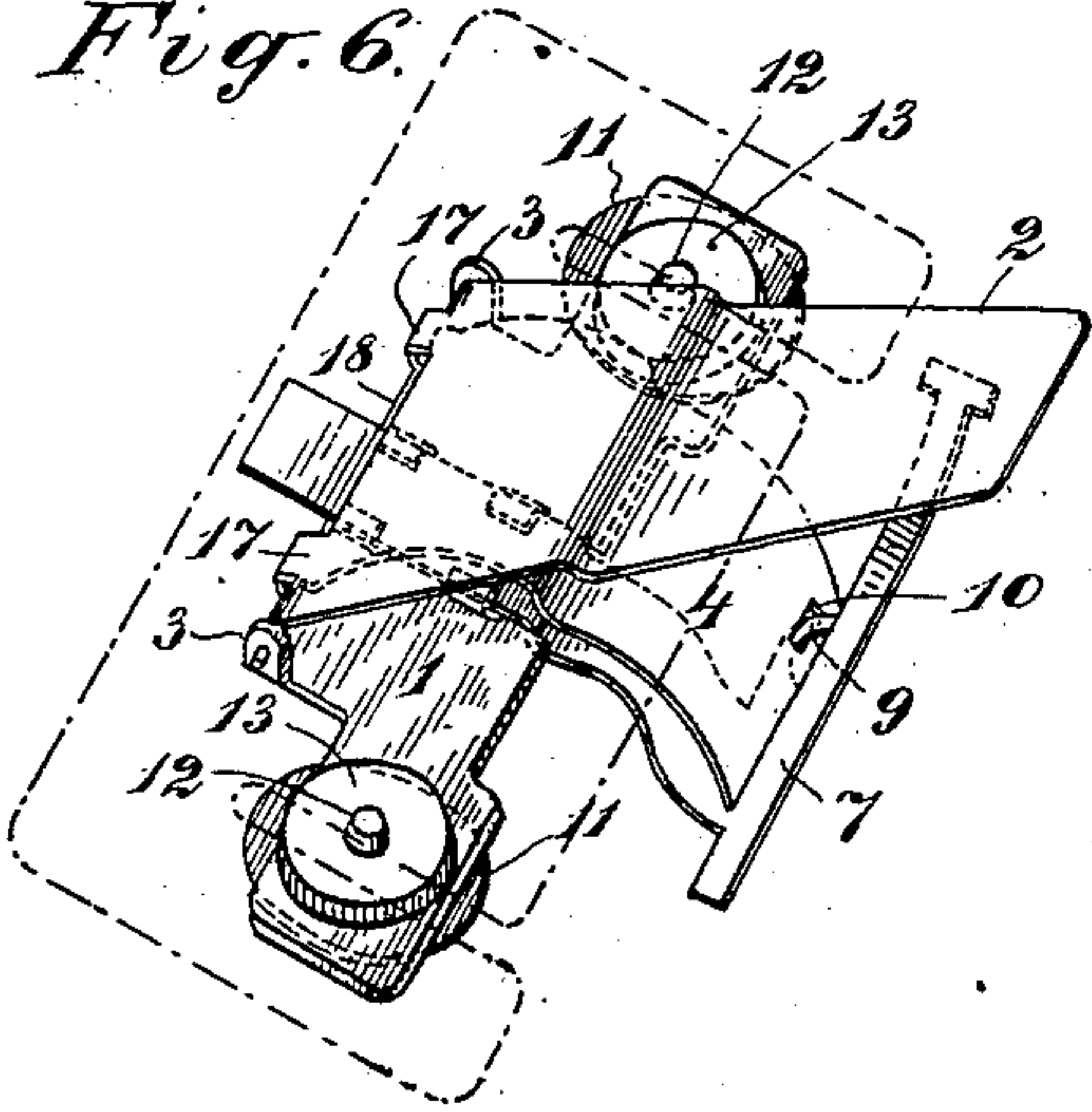


Fig. 7. Fig. 8.

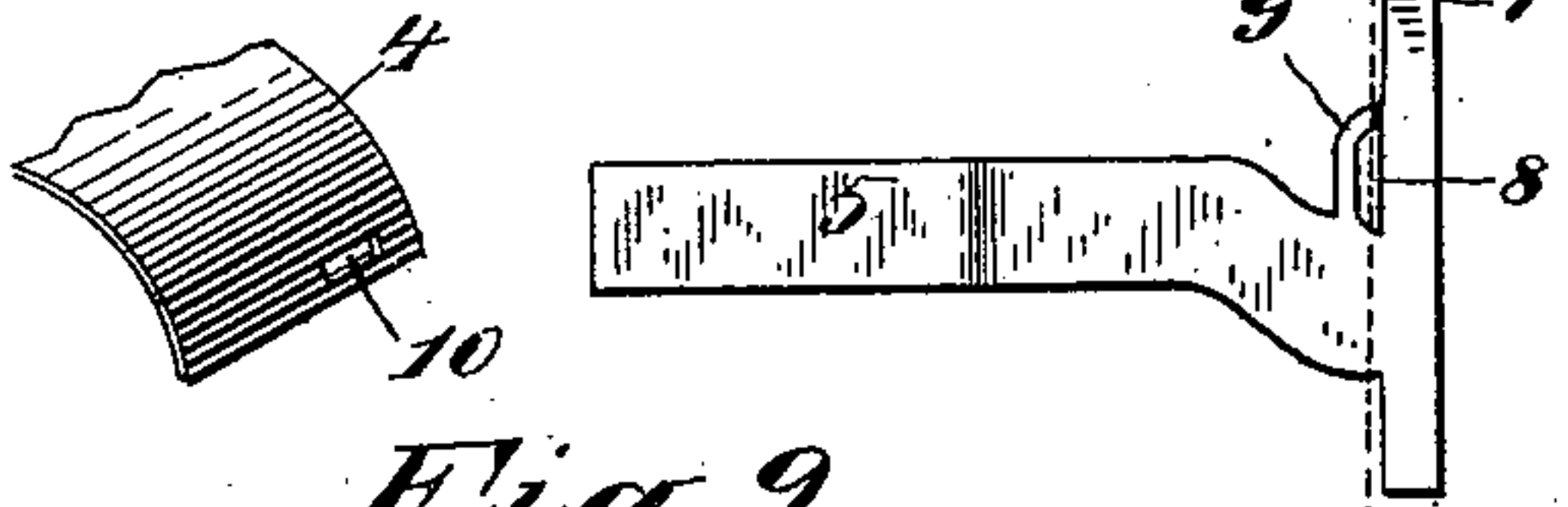


Fig. 9.

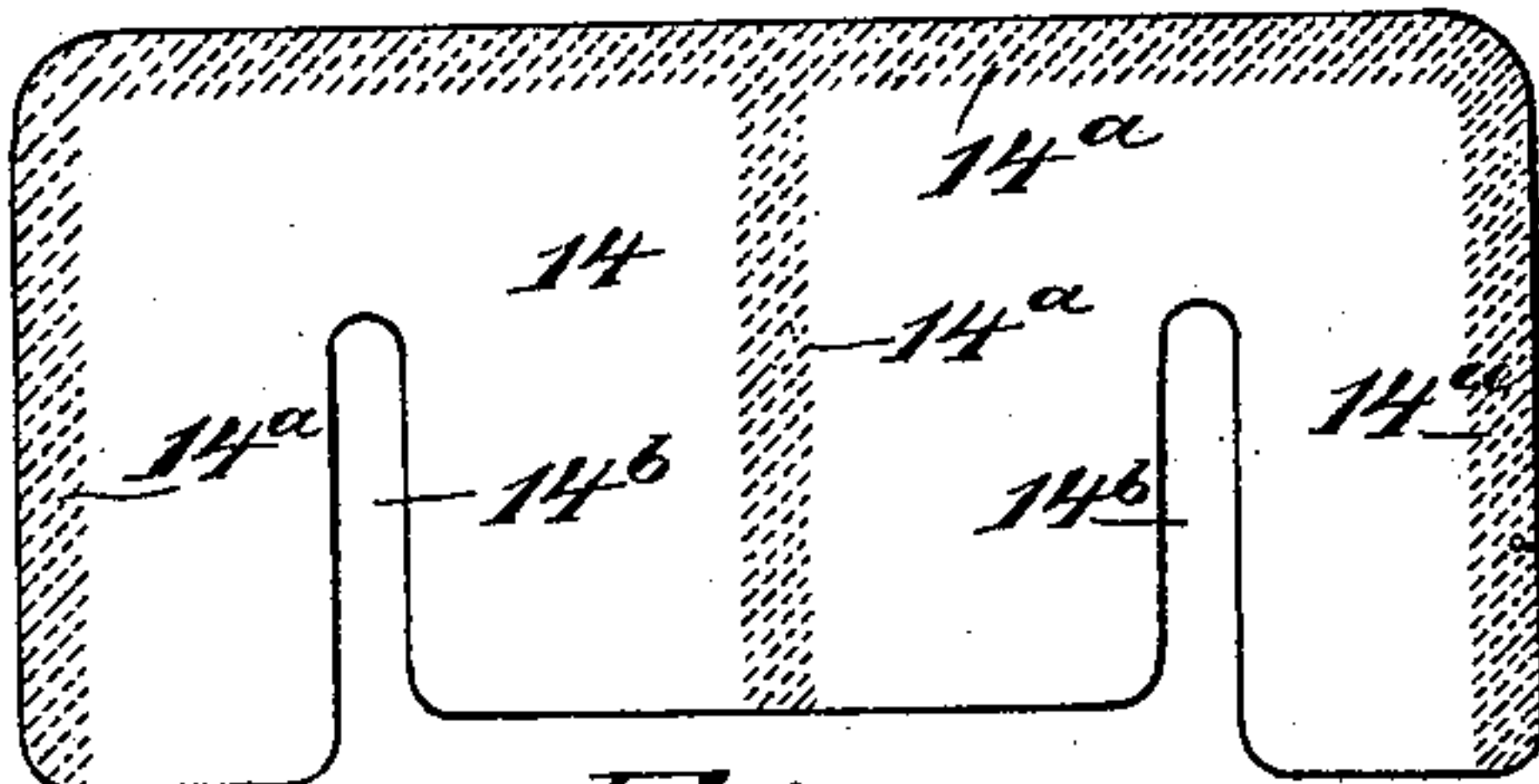
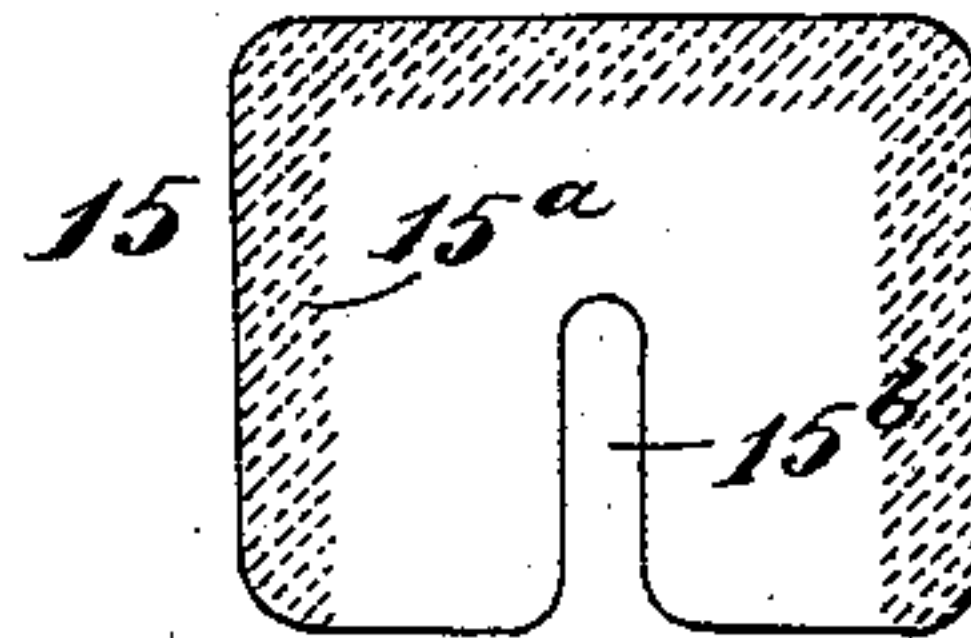


Fig. 12.

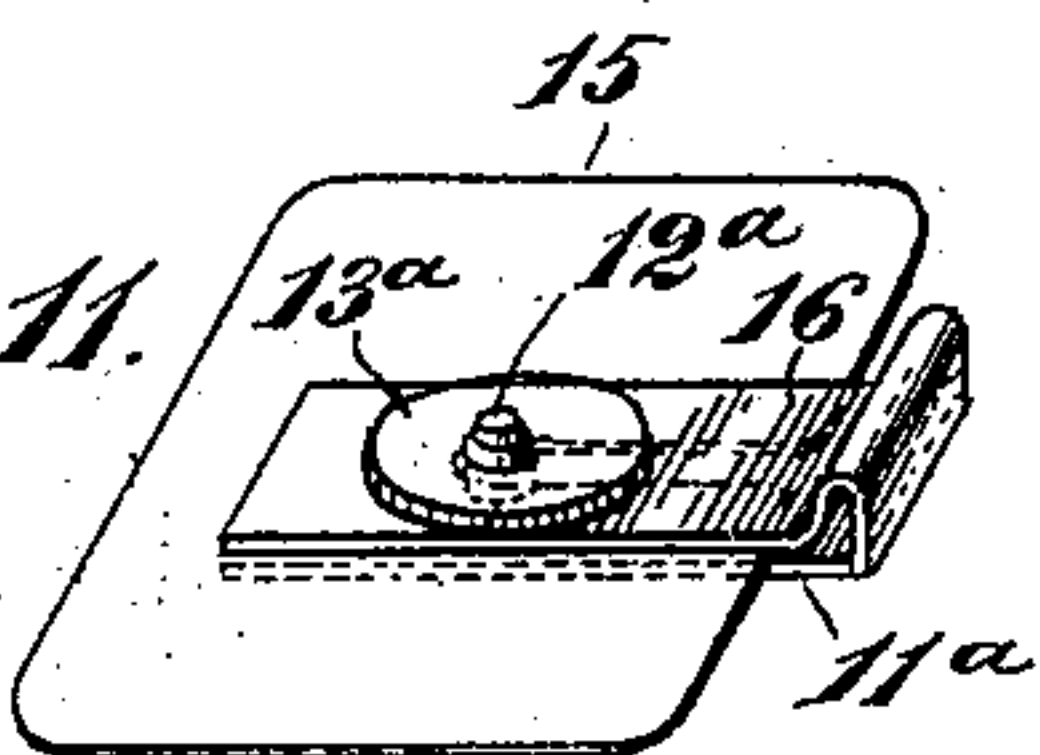


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Fig. 11.



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UNITED STATES PATENT OFFICE.

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FEED-GAGE FOR PRINTING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 711,779, dated October 21, 1902.

Application filed October 3, 1901. Serial No. 77,357. (No model.)

To all whom it may concern:

Be it known that I, EDWARD L. MEGILL, a citizen of the United States, residing in the city of New York, borough of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Feed-Gages for Printing-Presses, of which the following is a specification.

This invention relates in general to the class of feed guides and gages for the proper placing of the sheet on the platen of the press, of which class the gage shown in the United States Patent No. 596,214, granted to me December 28, 1897, is one example. The purpose of the device is in the main to provide means for automatically placing properly a misplaced sheet through the medium of a gripper on the press.

One of the important features of the present invention resides in the means for mounting the device adjustably and with accuracy on the tympan-sheet of the press, and another feature resides in the particular construction of the gage, as will be hereinafter more fully described.

In the accompanying drawings, which illustrate an embodiment of the invention and its application, Figure 1 is a side elevation of the gage. Fig. 2 is a front elevation. Fig. 3 is a plan with the operating arm and spring partly broken away to better disclose the parts below or beneath. Figs. 4 and 5 are fragmentary detail views, on a larger scale, illustrating the hinge construction. Fig. 6 is a perspective view of the gage detached. Figs. 7 and 8 are fragmentary detail views of parts of the gage. Fig. 9 is a plan view of the gummed retainer of the gage. Fig. 10 is a general plan or face view of the platen of a printing-press, showing the application of the gage thereto. Figs. 11 and 12 are views illustrating the application of the invention to a front gage for the sheet.

In Fig. 10, X designates an ordinary platen of a printing-press, Y the grippers thereof, and Z the tympan-sheet stretched over the platen in the usual way and by the usual means. All of these parts are too common in platen printing-presses to require special description.

S represents a sheet on the platen in position to be printed upon, the proper position-

ing of the sheet on the platen with respect to the form being secured ordinarily by a side gage or guide (usually at the left) and two front or bottom gages.

In Fig. 10 the two front gages are designated as a whole by B B and the side gage by A. It is in these gages and the means for securing them to the tympan-sheet in an adjustable manner and without cutting or in any way puncturing the said sheet that the present invention resides.

The side gage A will be first described with reference to Figs. 1 to 8, premising that devices of this class have been called "automatic sheet guides and setters." Preliminarily it may be stated that this gage A is designed to be employed as a side guide or gage for the sheet; that it is made from thin sheet metal, so that when the gripper which bears upon it at the time the impression is made and compresses it will not be elevated appreciably; that the pressure of the gripper shall move the sliding gage-head over the tympan-sheet and up to the gaging point or line on the latter, and that when the pressure is relieved the gage-head will be moved back again automatically. All of these features exist in the gage of my previous patent before mentioned; but in the present case the construction is different.

1 is the base-plate of the gage, which will be by preference of thin sheet metal.

2 is the operating presser-arm, also of sheet metal and relatively quite broad. This arm is hinged to lugs 3 on the base-plate and rests on the crown or arch of a broad spring 4, of thin resilient metal, which is hinged or secured to the base-plate at 4^a, Figs. 4 and 5, independently of the arm 2. The sliding gage proper is seen detached in Fig. 8. Its body 5 is slidably mounted in keepers 6 on the base-plate, and it has a head 7, which extends transversely of the body 5, one branch of said head being curved upward and spring-like and having on its upturned branch or extremity a T-head 7'. This gage proper (see Fig. 8) has a slot 8 and a hook 9, by which it is coupled to the front or free end of the spring 4, which has an aperture 10, Figs. 6 and 7, to be engaged by the hook 9. When there is no pressure on the gage, the spring 4 assumes the

arched or curved form clearly seen in Figs. 1 and 6, thus elevating the arm 2 and drawing back the sliding gage.

It will be seen by inspection that the broad arm 2 and spring 4 are directly over the sliding gage 5 and that when the impression is made, Fig. 10, the arm covers and protects all the working parts beneath it by preventing them from becoming inked, and therefore from being clogged with ink and lint during the operation of the press. It is well known to printers that ink from the rollers and form is liable to get on a gage of this class and interfere with its proper working, and it is one of the objects of the present invention to overcome this difficulty.

The tympan-sheet is stretched smoothly over the platen, and it has been the common practice to secure a gage thereto by a pin or spur which punctures the sheet. This means of attachment is objectionable, as it is important to keep the tympan-sheet intact. Another means which has been employed is to gum or paste the gage directly to the tympan-sheet; but this is objectionable for various reasons, one being the difficulty of attaining proper adjustment.

The means I employ for securing the gage to the tympan-sheet will now be described. At the sides of the gage are like clamping devices, each comprising a thin disk or plate 11 below the base-plate 1, an upright screw-threaded stud 12, fixed in said disk and extending up through a hole in the base-plate, and a milled nut 13, screwed onto the upper end of said stud. Operating in connection with these devices is a gummed retainer 14, Fig. 9. This retainer will be by preference of thin strong paper cut to substantially the form shown and provided with strips of gum 14^a and two slots 14^b, spaced to receive the studs 12. When this retainer is gummed to the tympan-sheet, two pockets are formed adjacent to the slots 14^b to receive the disks 11, which when the gage A is placed in position take under the sheet of the retainer 14, while the base-plate 1 takes over said sheet. When so placed, by screwing up the nuts the retainer-sheet will be clamped between the disks 11 and the base-plate and the gage thus securely held in place. At the same time the gage may be readily and accurately adjusted on the tympan-sheet by slightly loosening one or both of the nuts 13, as will be readily understood. This means of securing the gage has important advantages. When there are two adjustable securing-points, the gage cannot turn, as it is liable to do about a single securing-point. The construction provides for a relatively long adjustment without perforating or slitting the tympan-sheet. The dry gum on the retainer permits the latter to be secured to the tympan-sheet without wetting said sheet to any material extent; but the use of dry gum is not essential. The retainer may be secured directly to the metal

of the platen if desired or if the occasion requires it.

Fig. 11 is a perspective view showing one of the simple bottom gages B provided with means for retaining it in place on the tympan-sheet, which are of the same character as that described for the side gage A. The retainer 15 for this gage is seen detached in Fig. 12 and is provided with gummed portions 15^a and a slot 15^b. The gage B comprises a gage-head 16 on an upper base-plate 1^a, a thin under plate 11^a, provided with an upright screw-threaded stud 12^a, which projects up through the base-plate, and a milled nut 13^a.

Figs. 4 and 5 show the detent whereby the extent of the upward movement of the arm 2 is limited. On the arm are rearward projections 17 back of the hinging-rod 18, and these bear on stops 19 on the base-plate when the arm is elevated.

It will be understood by inspection that it will not be necessary in order to protect the working parts beneath from fouling with ink that both the operating or pressure arm and the arched spring shall be wide; but it is preferred to make them so. The means for securing or clamping the base-plate to the retainer 14 may be varied. A screw-operated device for this purpose is preferred.

It will be seen, especially in Fig. 9, that the material of the retainer 14 is not of the same width between the slots 14^b that it is at its ends and that consequently the material extends out at one side of the mouth of the slot more than at the other side. This is to facilitate the entry of the shanks of the clamping-screws 12 in the respective slots in placing the gage. The walls of the slots which extend out farthest from convenient guides for the screws of the securing devices.

The operation is as follows: When the platen of the press moves up to the form and the gripper moves up to the platen, the gripper first encounters the arm 2 and presses it flat up to or upon the platen, thus causing said arm to press upon the arched spring 4, which is also flattened and straightened. In straightening out, the free end of the spring 4 moves outward, carrying with it the sliding gage proper, thus moving the head 7 of the latter out to the gage point or line. The sheet S, which has been placed up to and against the upwardly-curved branch of the head 7, is thus also moved out to the gage point. The gripper bears on the yielding spring-like upturned end of the gage-head 7 and also presses it to the platen. The T-head 7' on the upturned end of the gage-head 7 serves to provide a broad or laterally-extended tip on the relatively slender and usually slightly tapered gage-head 7 for the gripper Y to impinge upon. As seen in Fig. 1, the gripper may take over the entire gage-head 7, or it may, as indicated by the dotted line in Fig. 8, only take over and bear on one of the branches of the T-head 7', and this will

serve to flatten down the gage-head. In any case the gripper will cross the arm 2 and bear thereon in front of the body of the gage.

By "hinged" as herein employed with reference to the arm 2 and spring 4 is meant the mounting to turn about a hinge-pin as distinguished from an integral construction, such as that shown in my former patent, No. 596,214.

10 Having thus described my invention, I claim—

1. An adjustable registering-gage, having a base-plate, and a plurality of screw clamping mechanisms for securing said base-plate
15 adjustably on the tympan-sheet at different points.

2. An adjustable registering-gage device having a slidable gage and two separate adjustable clamping devices for securing the
20 registering-gage device on the platen, said securing devices being situated at opposite sides of the slidable gage.

3. A feed-gage for a platen printing-press, having a screw clamping device for securing
25 it in place on the platen, in combination with a retainer of paper or the like slotted to receive the shank of the clamping-screw and having a portion of its under surface gummed, substantially as and for the purpose
30 set forth.

4. The combination with a gage for a printing-press having a base-plate, two disks 11 below the plate and provided with screw-threaded studs which project up through said
35 plate, and the nuts on the upper ends of said studs, of the slotted and gummed retainer 14, adapted to be secured to the tympan-sheet and to form pockets to receive said disks, substantially as set forth.

40 5. An automatic registering-gage having a base-plate, a broad spring 4 hinged to said plate, a broad presser-arm 2 hinged to said plate independently of the spring, and a sliding gage 5 mounted in keepers on the base-
45 plate under the spring and coupled to the latter, substantially as set forth.

6. An automatic registering-gage having a base-plate, a sliding gage mounted on the base-plate, a spring to operate said sliding
50 gage, and a presser-arm hinged to the base-plate, said arm being directly over the longitudinal axis of the sliding gage, whereby side draft is avoided.

7. An automatic registering-gage, having a
55 base-plate, a broad presser-arm hinged to said plate, a sliding gage proper the body of which is mounted slidably on the base-plate wholly under the said arm and extending longitudi-

nally parallel with the latter, and a spring for operating said sliding gage. 60

8. The combination with the registering-gage and the means for securing the same to the retainer, of the said retainer having in its edge two slots, the material of the retainer extending out farther at one side of the mouth
65 of the slot than at the other, substantially as and for the purpose set forth.

9. An automatic registering-gage having a presser-arm, a sliding gage proper provided with a spring-like head 7 having a T-shaped
70 extremity 7' for the gripper to bear on, and a spring for operating said sliding gage.

10. An automatic registering-gage device having a base-plate, an operating-arm hinged to said base-plate, a sliding gage, and means
75 to operate said gage disposed between the said arm and gage, said means being disposed directly over the longitudinal axis of the body of the sliding gage, whereby side draft is avoided in operating said gage. 80

11. The combination with a registering-gage, having clamping devices, of a retainer distinct from and adapted to be pasted or gummed to the tympan-sheet, said retainer
85 having in it slots to receive the clamping devices, whereby the gage may be secured adjustably on the platen without cutting the tympan-sheet.

12. An automatic and adjustable gage device having a base-plate, a slidable gage, an
90 arm and spring for operating the latter, and clamping devices for securing the base-plate of the gage device to the platen, the said clamping devices being set in line at an angle to the path of the slidable gage, and the point on
95 the operating-arm upon which the gripper is intended to impinge for operating the gage being situated on a line between the said clamping devices and the gage-head.

13. An automatic and adjustable gage device having a base-plate, a slidable gage, an
100 arm and spring for operating the latter, and clamping devices for securing the base-plate on the platen, the said clamping devices being set in a line at an angle to the path of the
105 sliding gage, and the depressible head of said gage being in advance of said line for the gripper to impinge upon.

In witness whereof I have hereunto signed my name, this 27th day of September, 1901, 110
in the presence of two subscribing witnesses.

EDWARD L. MEGILL.

Witnesses:

PETER A. ROSS,

H. ALAN CONNETT.