

No. 705,527.

Patented July 22, 1902.

H. J. HALLE.

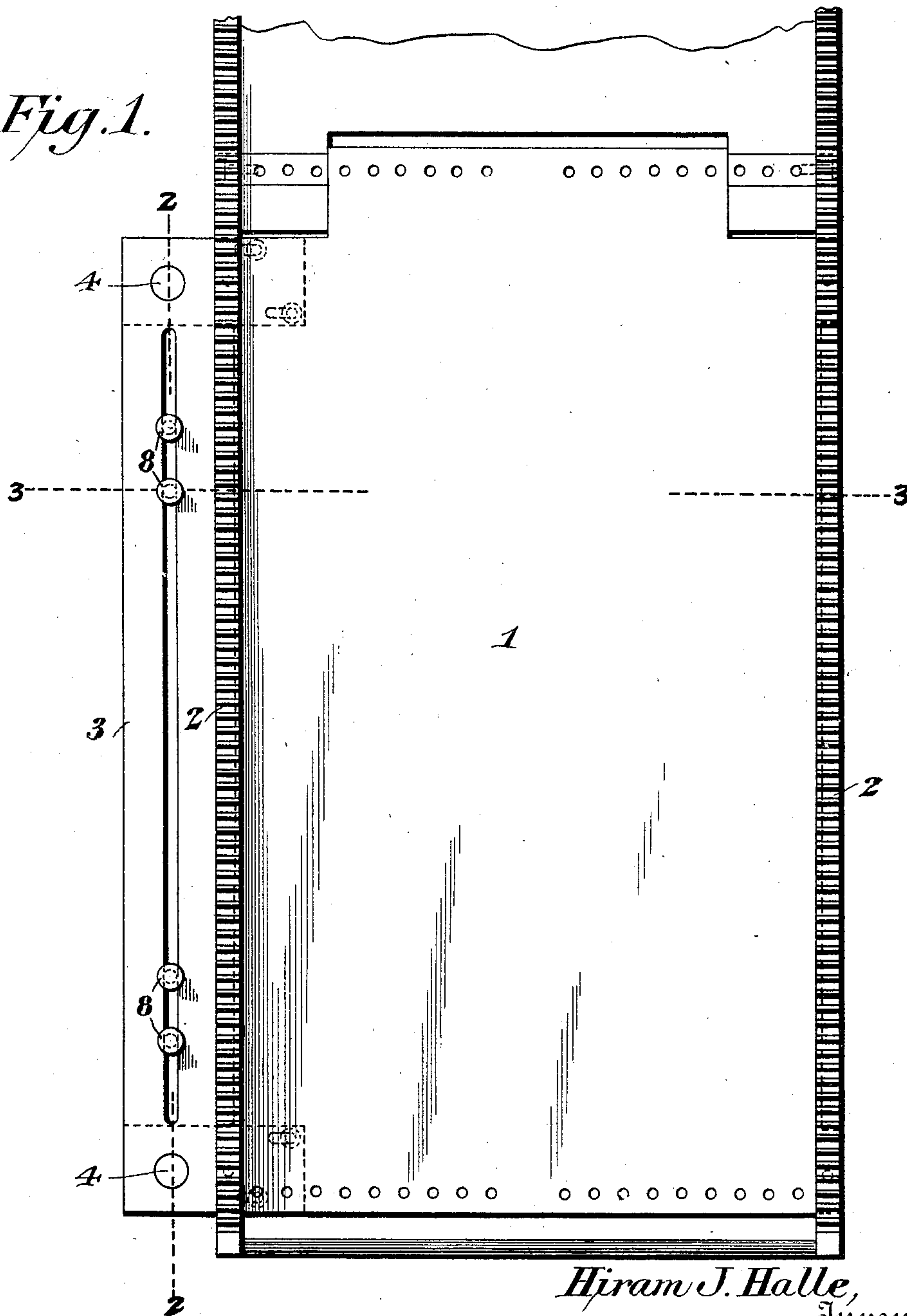
WORK GAGE ATTACHMENT FOR TYPE WRITING MACHINES.

(Application filed Dec. 18, 1900.)

(No Model.)

4 Sheets—Sheet 1.

Fig. 1.



Hiram J. Halle,
Inventor

By

E. G. Siggers

Attorney

Witnesses
Jas. E. McClathran
L. J. Hallenbeck

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H. J. HALLE.

WORK GAGE ATTACHMENT FOR TYPE WRITING MACHINES.

(Application filed Dec. 13, 1900.)

(No Model.)

4 Sheets—Sheet 2.

Fig. 2.

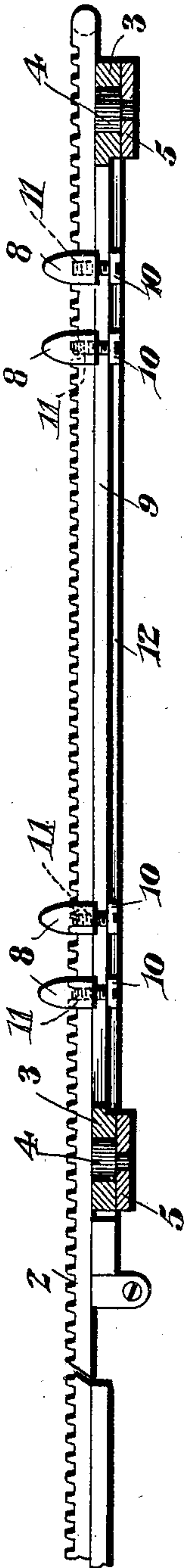


Fig. 3.

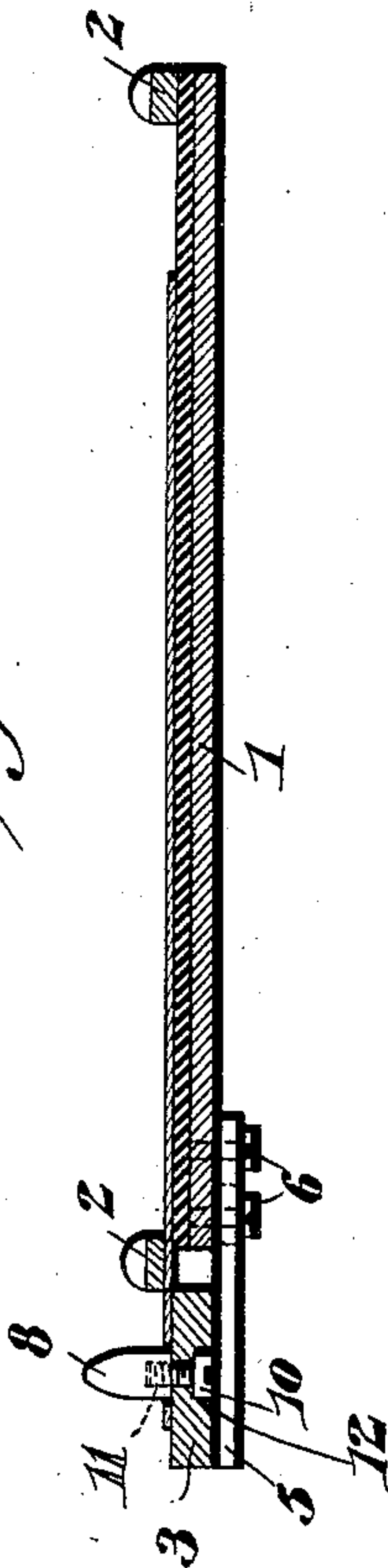
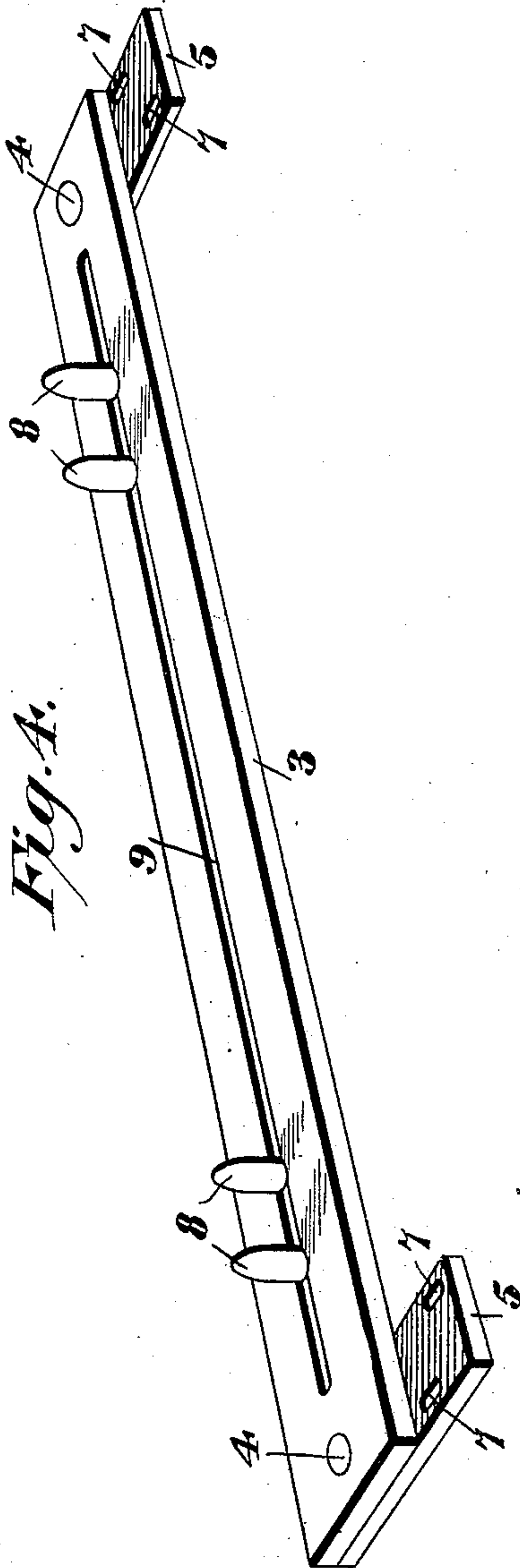


Fig. 4.



Hiram J. Halle,
Inventor

By

E. J. Siger
Attorney

Witnesses
Jas. E. McCathran
D. R. Hallenberger.

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H. J. HALLE.

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4 Sheets—Sheet 3.

Fig. 5.

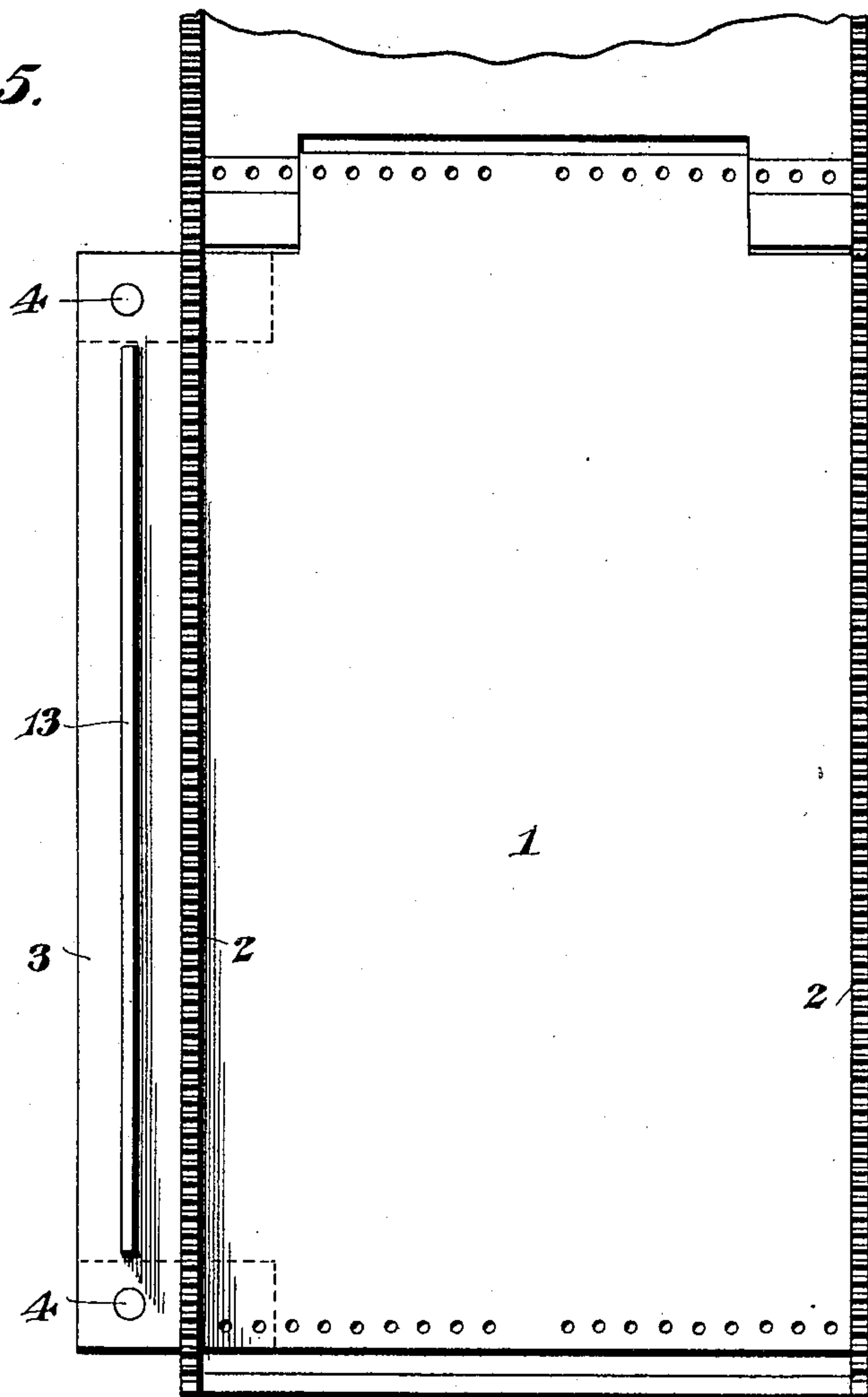
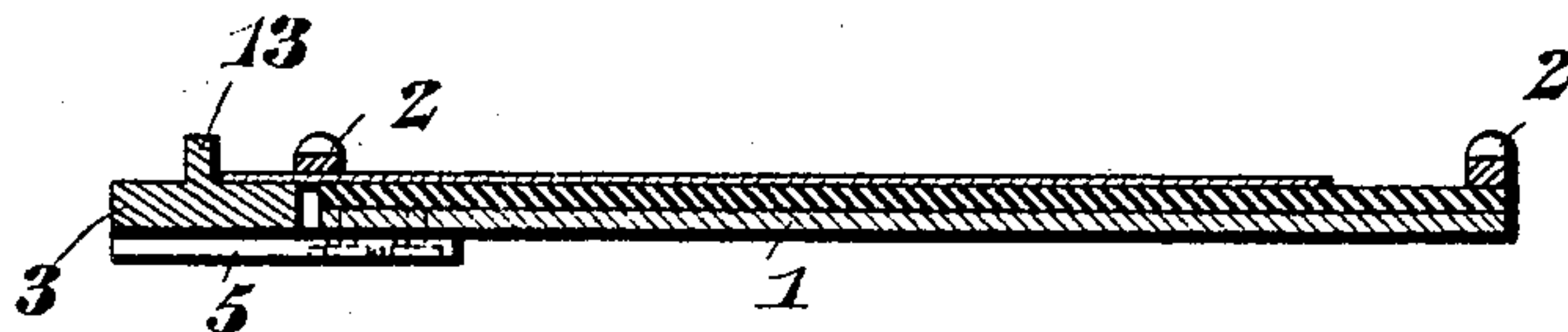


Fig. 6.



Hiram J. Halle, Inventor

By

E. J. Siggers

Attorney

Witnesses
Jas. E. McLaughlin
D. P. McLaughlin

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H. J. HALLE.

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4 Sheets—Sheet 4.

Fig. 8. Fig. 9.

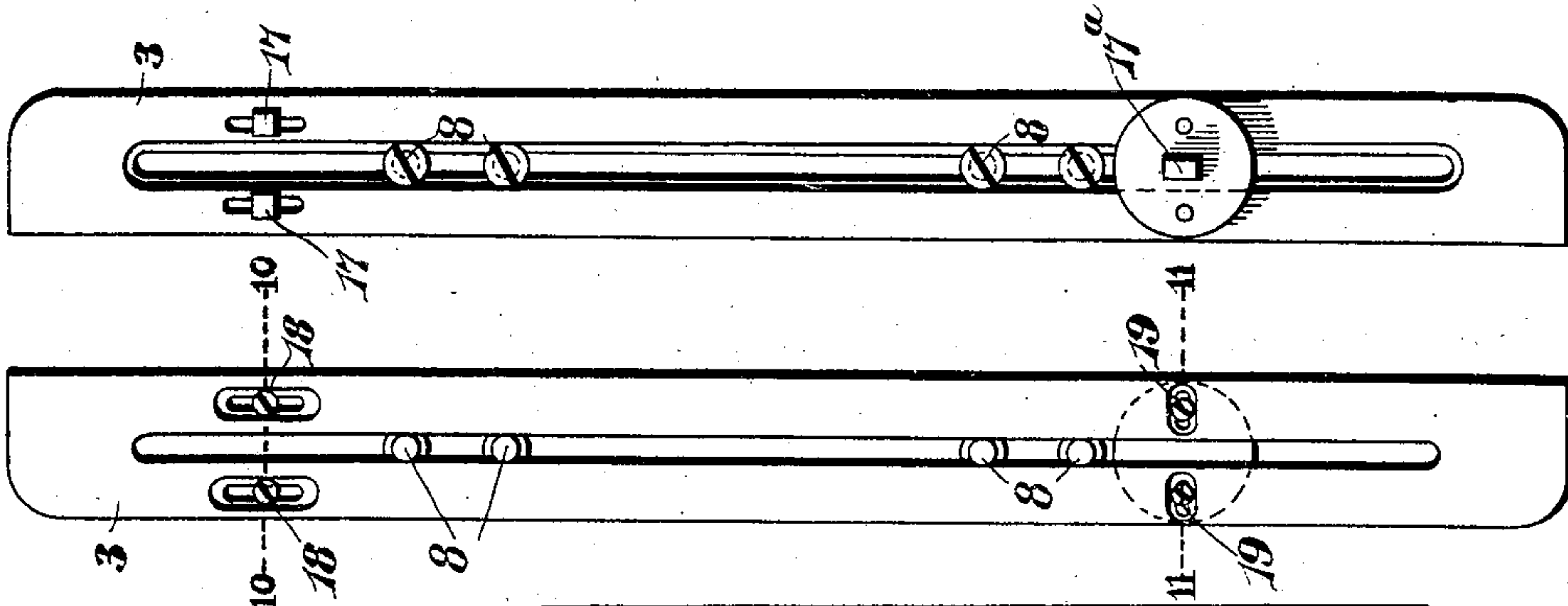


Fig. 10.

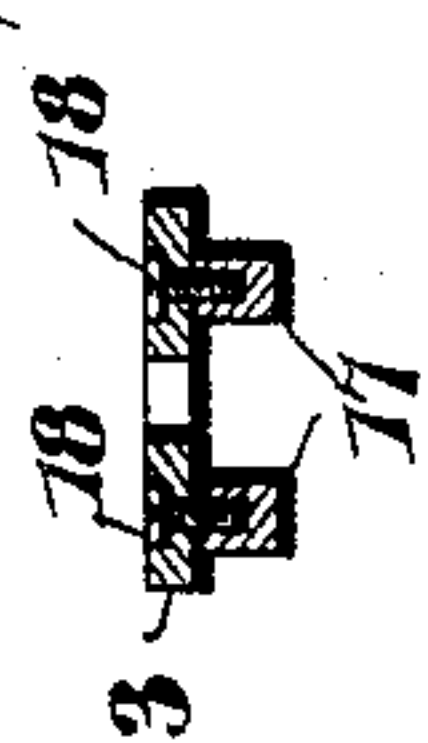
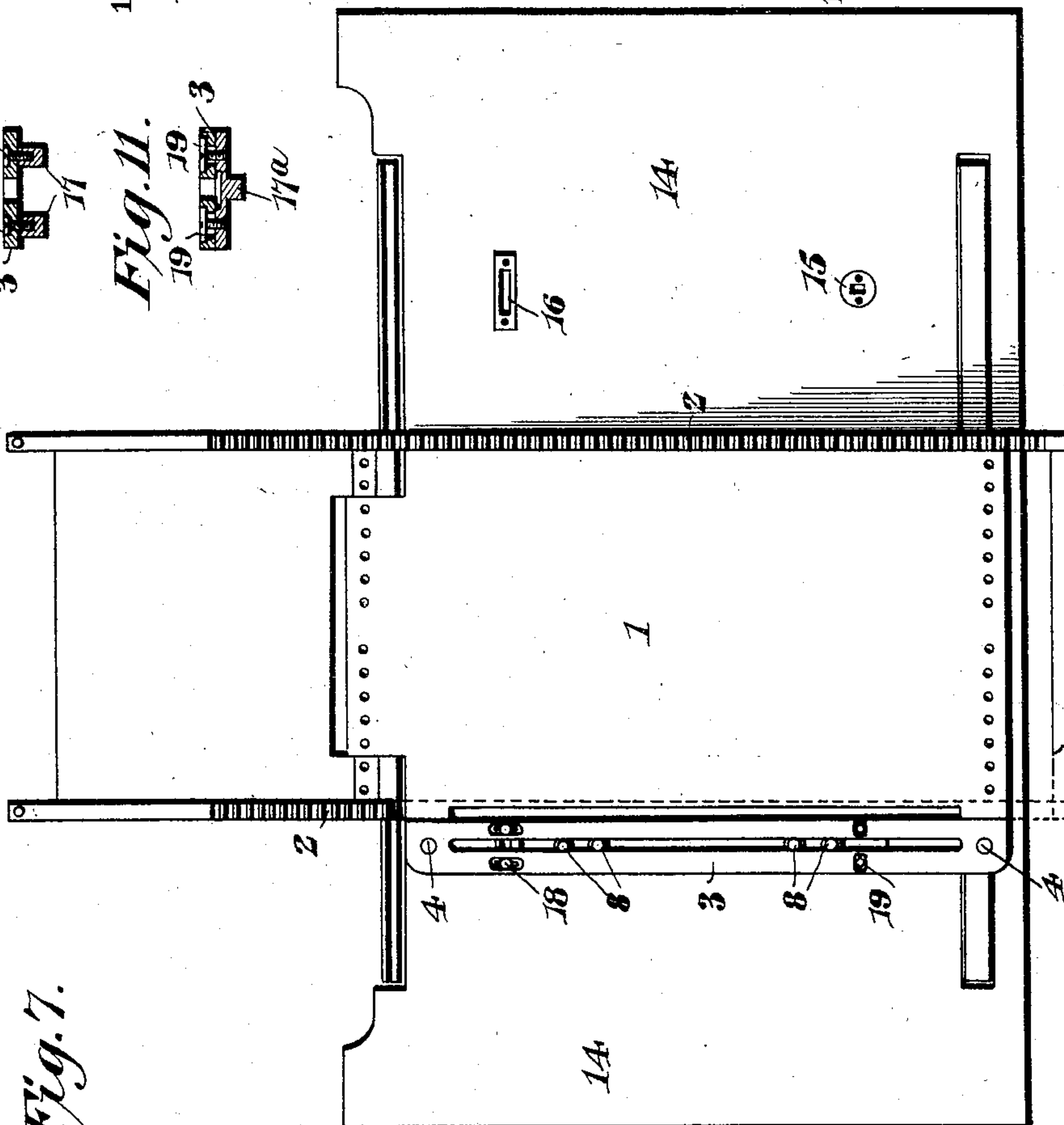


Fig. 11.



Fig. 7.



Hiram J. Halle, Inventor

By

E. G. Siger

Attorney.

Witnesses
Jas. E. McEachron
J. H. Haupt.

UNITED STATES PATENT OFFICE.

HIRAM JOSEPH HALLE, OF CLEVELAND, OHIO, ASSIGNOR TO THE FISHER BOOK TYPEWRITER COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF DELAWARE.

WORK-GAGE ATTACHMENT FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 705,527, dated July 22, 1902.

Application filed December 13, 1900. Serial No. 39,720. (No model.)

To all whom it may concern:

Be it known that I, HIRAM JOSEPH HALLE, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and useful Work-Gage Attachment for Type-Writing Machines, of which the following is a specification.

This invention relates to type-writing machines, particularly of that class including a flat platen upon which the sheet or work is held in a flat or spread-out condition during the printing operation, and has special reference to an improved work-gage associated with the platen to provide improved means for locating and holding the work in the proper printing position.

To this end the present invention contemplates in one form of the invention a work-gage in the form of an attachment separate from the platen, but designed to be directly associated therewith, for effecting the registering of the work in the printing position. As the attachment or gage may be applied either directly to the platen or to an adjacent part of the machine-support, it is designed to be readily attachable and detachable, so that the platen may be used with or without the gage, thus permitting of converting the platen from billing and loose-sheet work to bookwork.

A further object of the invention is to provide a work-gage attachment involving the provision of means for alining the work upon the platen and in some phases of the invention for both holding and alining the work in the proper printing position.

Another object of the invention is to provide a work-gage attachment especially useful in connection with bills or other sheets having file-holes and in this aspect to also provide for suitable adjustment to conform to the variations in the styles and spacing of these file-holes which will be found in different classes of work.

With these and many other objects in view, which will more readily appear to those familiar with the art as the nature of the invention is better understood, the same consists in the novel construction, combination,

and relation of parts hereinafter more fully described, illustrated, and claimed.

The essential features of the invention, involving the provision of an attachable and detachable gage, the location of the gage proper or gage-abutment outside of the vertical plane of the adjacent rail or guide, and the adjustability of the gage proper or gage-abutment, are susceptible to a wide range of modification without departing from the spirit or scope of the invention; but the preferred embodiments of the latter are shown in the accompanying drawings, in which—

Figure 1 is a plan view of a type-writing-machine platen, showing one embodiment of the invention in which the attachment is applied directly to the platen and serves to hold the gage or gage-abutment outside of the vertical plane of the adjacent rail or guide. Fig. 2 is a longitudinal sectional view on the line 2 2 of Fig. 1. Fig. 3 is a transverse sectional view on the line 3 3 of Fig. 1, showing the position of a sheet or other piece of work having file-holes for engagement with the gage-pin. Fig. 4 is a detail in perspective of the preferable form of gage attachment shown in Figs. 1, 2, and 3. Fig. 5 is a plan view similar to Fig. 1, showing a modification in which the gage proper or gage-abutment may be in the form of a single continuous rib or shoulder to provide means solely for alining or locating work, such as sheets having no file-holes. Fig. 6 is a cross-sectional view of the construction shown in Fig. 5. Fig. 7 is a plan view of a type-writing-machine support or table and a platen, showing another embodiment of the invention in which the attachment may be fitted to the support or table instead of directly to the platen, as shown in the other forms. Figs. 8 and 9 are detail top and bottom plan views, respectively, of the form of attachment adapted for mounting upon a type-writing-machine support or table, showing one type of fastening means for effecting a connection between the attachment and the support or table. Figs. 10 and 11 are detail sectional views, respectively, on the lines 10 10 and 11 12 of Fig. 8.

Like numerals of reference designate cor-

responding parts in the several figures of the drawings.

The improvements forming the subject-matter of this application present a different embodiment of the invention disclosed in the application of C. F. Laganke, filed August 20, 1900, Serial No. 28,441. In that application is disclosed the idea of a work-gage arranged to lie in a plane beneath a track or guide, whereas the present application contemplates a work-gage for similar purposes which is designed to be located wholly without the plane of a rail or guide, whether disposed at the inner or outside of such plane—that is to say, whether arranged between the rails or outside the same. In this aspect of the invention I desire it to be understood that it is not limited to making the invention in the form of a complete attachment exclusively, as this broad idea can be carried into effect in a work-gage which forms a permanent part of the platen. For an example of this see the application of C. F. Laganke, Serial No. 52,221. The present invention also contemplates a work-gage for platens in the form of an attachment which can be readily applied for use in connection with the platen or removed when not desired in order to permit of the ordinary use of the platen for book or other work. In addition to these general improvements the invention also has in view the provision of an adjustable gage capable of being lined up with perfect true-ness with reference to the platen and also comprising means for adapting the same to the variations in the styles of the file-holes and the spacing thereof. This particular improvement is also susceptible of application to that form of the invention shown in the application, Serial No. 52,221, aforesaid.

In the accomplishment of the above-mentioned general objects the invention may be embodied in a variety of different forms, but in all of these forms it is necessary to provide an attachment having a gage proper or gage-abutment which comprises means for alining and locating the bill or other sheet upon the platen. In the preferable forms the gage proper or gage-abutment is intended to be so constructed as to comprehend both holding and alining means for the work, such as bills or other sheets having file-holes therein.

Referring first to the form of the invention shown in Figs. 1 to 4, inclusive, of the drawings, the numeral 1 designates the flat platen of the type-writing machine, upon which are designed to be placed the main track rails or guides 2, which support the usual traveling printing mechanism and which in some uses of the type-writing machine are designed to be lowered flat upon the work to hold the same upon the platen during the printing operation, this being specially true in book-work, where the platen is inserted beneath the page to be printed upon and the latter is held to the platen by the rails or guides 2 when lowered thereon. The form of gage at-

tachment shown in Fig. 1 comprehends a supporting member 3 in the form of a straight strip adapted to be arranged longitudinally of the platen at one side edge thereof and carrying at its opposite ends holding-pins 4, adapted to engage with the attaching-brackets 5, which are adjustably and detachably connected to the under side of the platen contiguous to one edge thereof through the medium of screws or equivalent fasteners 6, passing through slots 7 in the brackets and engaging threaded openings formed in the platen, thus providing a detachable and adjustable connection for said brackets, which not only permits of the same being readily removed and replaced, but also permits of such adjustment as may be necessary for lining up the gage or otherwise adjusting the same with reference to the contiguous part of the platen and the adjacent rail or guide 2.

It will of course be understood that any equivalent detachable and adjustable connection may be resorted to for connecting the attaching-brackets 5 with the platen and that any suitable means may be resorted to for locating and holding the supporting member or strip 3 upon the oppositely-arranged brackets 5, inasmuch as the holding-pins 4 may be carried by the brackets instead of by the supporting member or strip 3 or even a screw or other permanent connection between the supporting member or strip and the brackets utilized without affecting the nature of the invention as a removable or detachable attachment designed to be associated with the platen.

In carrying out the invention the locating as well as the locating and holding of the work is accomplished through the medium of a gage proper or gage-abutment carried by the supporting member or strip 3 of the attachment. This gage proper or gage-abutment may be constructed in different ways, but in the preferable form thereof consists of a plurality of alined gage-pins 8, projecting upwardly from the supporting member or strip 3. Inasmuch as the plurality of gage-pins are alined in a direction longitudinally of the platen or in a plane parallel with the plane of the adjacent machine rail or guide 2, the same necessarily constitute an abutment against which the bill or sheet may be placed to provide for alining or locating it upon the platen; but by reason of the projection of said pins or elements 8 above the supporting member or strip 3, and consequently above the plane of the platen-surface, the work may not only be engaged at its upper edge against the alined series of such pins, so as to be properly alined or located, but also in handling the sheets which are provided with file-holes the same may have these holes engaged directly over the pins to secure a positive holding thereof as well as the alinement of the same upon the platen. These pins 8 may be fitted to the supporting member or strip 3 in any suitable manner, but are pref-

erably detachably and adjustably connected with said supporting member or strip to accommodate the attachment to variations in the sizes of the file-holes and also to suit the distances or spaces between the same. Any detachable and adjustable connection between the pins and the supporting member 3 may be resorted to for this purpose. However, a practical construction is shown in the drawings and consists in providing the supporting member or strip 3 with a longitudinal slot 9, accommodating for movement therein adjusting-screws 10, passing upward through the slot and engaging threaded sockets or openings 11 in the pins and having their heads seated in a channel 12, milled or otherwise formed longitudinally in the under side of the supporting member or strip 3, whereby the said heads of the screws may be seated flush with the under side of the said supporting member or strip. By loosening the screws 10 the gage-pins 8 may be slid to any position within the limits of the slot 9 and held rigid in such position by the retightening of the screws. In this connection it will be observed that each gage-pin is independently adjustable and equipped with its own fastening means or screw, so as to be readily detachable as well as adjustable to the desired position. Furthermore, the gage-pins 8 may be of any size or shape, as it is apparent that on account of the pins being removable and adjustable the size suited to the work can be selected and set or adjusted to suit the position of the file-holes in the work to be operated upon. This constitutes one of the advantageous and desirable features of the invention.

As already explained, the gage proper or gage-abutment may consist of any suitable projection carried by the supporting member or strip 3, and while preferably consisting of a plurality of alined pins which provide not only for locating, but also for both locating and alining the work, still such a modification as shown in Figs. 5 and 6 may be resorted to, said modification involving simply the provision of the supporting member or strip 3 at the upper side thereof with a longitudinally-arranged abutment rib or shoulder 13, against which the edge of the work may be placed before the main rails or guides 2 are lowered thereon.

In the forms of the invention already described—namely, those shown in Figs. 1 to 6, inclusive, of the drawings—it is to be observed that by reason of carrying the gage upon the separate supporting member or strip 3, which is to be attached to the platen in a manner to be easily removed, the platen can be used for ordinary purposes where the gage may not be required or desired—such, for instance, as using the platen for insertion under the page of a book. This is an advantageous feature of the invention on account of converting the platen from loose-sheet or billing work to bookwork.

While the forms described involve the idea

of attaching the gage or, rather, the support of the gage proper directly to the platen, the general objects of the invention may be subserved by mounting the same in position on a separate support and at the same time in such a location that the same may be lined up with trueness alongside of the platen. A modification embodying this thought is shown in Figs. 7, 8, and 9 of the drawings and consists in adapting the attachment for mounting upon a type-writing-machine support or table 14, such as disclosed, for instance, in my former patent, No. 621,660. This form of type-writing-machine table or support as now placed upon the market is provided upon the top thereof with front and rear pairs of slotted catch-plates 15 and 16, respectively, which are designed to be engaged by the catches of the machine-cover. These catch-plates may be utilized in the manner shown in Fig. 7 to receive the fasteners or holders for the supporting member or strip 3 of the attachment. These fasteners or holders may be of any suitable form, but in the construction shown simply consist of holding or fastening studs projecting from the under side of the supporting member or strip and arranged in spaced relation corresponding to the distance between the front and rear catch-plates 15 and 16. Preferably in the construction shown a pair of the holding or fastening studs 17 are fitted to the supporting member or strip 3 contiguous to one end and are arranged in transverse alinement, besides having an adjustable connection 18 with the supporting member or strip to be adapted to variations in the catch-plates with reference to the plane of the platen, said pair of transversely-alined holding or fastening studs 17 being adapted to fit in the longitudinally-disposed slot of the rear catch-plate 16, while the reversely-disposed slot of the front catch-plate is adapted to receive a single holding or fastening stud 17^a, attached to the supporting member or strip 3 contiguous to its opposite end. The said single holding or fastening stud 17^a is also shown as having an adjustable connection 19 with the supporting member or strip, so that the strip and the platen can be lined up with perfect trueness to each other.

In the application of the invention just described it will be understood that after the supporting member or strip of the attachment is fitted upon the machine support or table the platen is moved alongside of the same in order to maintain the same relation thereto as described in connection with the other forms of the invention. It will be observed, however, with reference to the modification shown in Fig. 7 that the means described for mounting the attachment are simply illustrative of one way of accomplishing this result as any equivalent means could be utilized just so long as provision is made for detachably mounting the supporting member or strip and also providing for a sufficient ad-

justment thereof, independent of the adjustment of the gage pins or abutment, to admit of the proper lining up of the gage-abutment with relation to the platen.

5 It has already been clearly pointed out that the present invention contemplates the arrangement of the gage proper or gage-abutment without the plane of a machine rail or guide, and while in the forms shown the gage
10 proper or gage-abutment is illustrated in a position on the outside of the adjacent rail or guide, still it will be obvious without further illustration that the same could be disposed
15 between the rails or guides and still subserve the novel functions herein set forth. I wish it understood that by the expression "without the plane of a track or guide" embodied in the claims I desire to comprehend both constructions.

20 At this point attention may be called to the fact that in both of the illustrated embodiments of the invention the gage proper or gage-abutment has a support distinct from the platen, although such distinct support is
25 in some instances secured to the platen while in others it is secured to the table. I therefore desire the phrase "distinct from the platen" as applied to the gage-support to mean any support distinct from or other than
30 the platen whether such distinct support is secured to the platen or not. Attention is also called to the fact that in the illustrated embodiments of the invention a track or guide and the work-gage are coöperatively
35 related to hold and aline the work—that is to say, each of these members serves to retain the work in its proper relation with respect to the other member. The track or guide engages the work to hold it down upon the
40 gage, and the gage in turn by fitting into or interlocking with the work-sheet serves to aline the latter in proper position to be clamped upon the platen by the track. It is therefore evident that the track and gage co-
45 operate to hold and aline the work whether or not said members are arranged for direct coöperation or engagement. The term "interlocking engagement" employed in the claims is intended to distinguish my device
50 from gages which serve merely as an abutment and which therefore only limit the movement of the work-sheet in a given direction. The interlocking or interfitting of my work-gage with the binding-holes in the margin of the work-sheet serves, on the contrary,
55 to prevent the shifting of the sheet in any horizontal direction, so that it is retained accurately in the printing position and is clamped against the writing-surface by the
60 main track or guide.

While in Figs. 5 and 6 of the drawings the workage acts solely as an abutment for the work, in the other forms the pins may be used either to hold the work, to aline the work, or
65 to both aline and hold, as the operator may require. Therefore the terms "work-gage" and "gage-abutment" are to be understood

as comprehending any form of gage which may serve to position the work, either by an interlocking engagement therewith or by
70 serving as an abutment only for the edge of the work-sheet and irrespective of whether said abutment is formed by a continuous strip or by a series of pins or projections. The term "work-gage attachment" is de-
75 signed to comprehend a device for either temporary or permanent attachment to the platen or to an adjacent part and including a gage proper and a supporting member. Therefore it should also be understood that
80 while in the present embodiment of the invention the lateral adjustment of the work-gage is effected by the adjustment of the attachment as a whole the expression "a work-gage adjustable both laterally and longitu-
85 dinally of the platen" is intended to comprehend a work-gage or gage-abutment which may be shifted both laterally and longitudinally whether said gage-abutment is ad-
90 justed in one or both directions upon its supporting member or whether the supporting member is so adjusted to effect the positioning of the gage.

From the foregoing it is thought that the construction, use, and many advantages of
95 the herein-described work-registering gage will be readily apparent to those familiar with the art without further description, and it will be understood that various changes in the form, proportion, and minor details of
100 construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new, and desired to be secured
105 by Letters Patent, is—

1. In a type-writing machine, the combination with a flat platen and the main tracks or guides for the traveling printing mechanism, of an adjustable work-gage disconnected from
110 but coöperating with a track or guide to aline and hold the work.

2. In a type-writing machine, the combination with a flat platen and the main tracks or guides for the traveling printing mechanism,
115 of a work-gage adjustable longitudinally of the platen and disposed to coöperate with a track or guide to aline and hold the work.

3. In a type-writing machine, the combination with a flat platen and the main tracks or
120 guides for the traveling machine, of a work-gage comprising a plurality of independently-adjustable gage members designed to be adjusted to register with the file-holes in a work-sheet or bill to retain said sheet or bill in the
125 printing position.

4. In a type-writing machine, the combination with the flat platen, and the machine rails or guides, of a work-gage arranged to lie
130 outside of the vertical plane of a track or guide and adjustable to different positions to accommodate different work-sheets.

5. In a type-writing machine, the combination with the flat platen, and the movable

main tracks or guides for the traveling printing mechanism, of a work-gage arranged to lie in a plane at one side of a track or guide, said track or guide and said work-gage being
5 disposed to cooperate to hold and aline the work.

6. In a type-writing machine, the combination with the platen and the movable tracks or guides for the traveling printing mechanism, of a work-gage arranged to lie outside of
10 a track or guide and to aline a work-sheet held by said track or guide.

7. In a type-writing machine, the combination with the platen, and the rails or guides
15 for the traveling printing mechanism, of a work-gage having a support distinct from the platen and arranged to lie outside of the vertical plane of a rail or guide.

8. In a type-writing machine, the combination with the platen, and the rails or guides
20 disposed thereon for the traveling printing mechanism, of a work-registering gage attachment having a gage proper or gage-abutment located outside of the vertical plane of
25 a rail or guide and independent of the latter.

9. In a type-writing machine, the combination with the flat platen, and the tracks or
30 guides for the traveling printing mechanism, of a work-registering gage attachment having a gage proper arranged longitudinally of the platen, at one edge thereof and outside
of the vertical plane of a track or guide, the gage proper and a track or guide being disposed in cooperative relation to aline and hold
35 a work-sheet.

10. In a type-writing machine, the combination with the flat platen, and the rails or
40 guides disposed thereon for the traveling printing mechanism, of a gage attachment arranged longitudinally of the platen at one edge thereof, and having a gage proper or
gage-abutment located outside of the vertical plane of a rail or guide for interlocking engagement with a work-sheet.

45 11. In a type-writing machine, the combination with the platen, and the machine rails or guides arranged thereover, of a work-gage detachably supported by the platen outside
of the vertical plane of a machine rail or
50 guide, and arranged to prevent the shifting of the work-sheet in any horizontal direction.

12. In a type-writing machine, the combination with the platen and the machine rails
55 or guides arranged thereover, of a work-gage detachably and adjustably supported by the platen outside of the vertical plane of a machine rail or guide, and cooperating therewith.

13. In a type-writing machine, the combination with the platen, of a work-gage detachably attached to the platen and arranged
60 longitudinally at one side edge thereof, outside of a machine rail or guide, and disposed to cooperate therewith to aline and hold the
65 work.

14. In a type-writing machine, the combination with the flat platen and the rails or

guides, of a work-gage attachment detachably and adjustably fitted to the platen at
one side thereof, and provided with a gage
70 proper or gage-abutment located outside of a rail or guide and arranged to have interlocking engagement with the work.

15. The combination with a type-writing-machine platen, and the rails or guides, of a
75 supporting member distinct from the platen and having a gage or gage-abutment lying in a plane outside of the vertical plane of a rail or guide and arranged for interlocking engagement with the work to prevent the shifting
80 of the latter in any horizontal direction.

16. A work-gage for type-writing machines comprising an adjustable element or elements
85 arranged outside of the vertical plane of a machine rail or guide to have interlocking engagement with a work-sheet.

17. A work-gage attachment for type-writing machines arranged to lie outside of the
vertical plane of a machine rail or guide and adjacent to one longitudinal edge of the
90 platen, said gage attachment comprising a supporting member distinct from the platen, and an adjustable gage proper or gage-abutment carried by said member and arranged to engage the work-sheet to prevent the shifting
95 thereof in any horizontal direction.

18. A work-gage for type-writing machines arranged to lie without the plane of a machine
rail or guide, said gage comprising a plurality of adjustable projections.
100

19. A work-gage attachment for type-writing machines arranged to lie outside of the
vertical plane of a machine rail or guide, said gage attachment comprising a supporting
105 member, and a plurality of alined pins detachably carried by said member.

20. A work-gage attachment for type-writing machines arranged to lie outside of the
vertical plane of a machine rail or guide, said attachment comprising a supporting member,
110 and a plurality of alined pins detachably and adjustably carried by said member.

21. A work-gage attachment for type-writing machines arranged to lie outside of the
vertical plane of a machine rail or guide, said
115 attachment comprising a supporting member having a longitudinal guide or slot, a plurality of detachable and adjustable pins, and fastening means extending from said guide or slot and engaging with the pin.
120

22. In a type-writing machine, the combination with the platen, and the rails or guides,
of a supporting member detachably fitted to the platen at one side edge, and a plurality of
125 alined pins adjustable longitudinally of said supporting member and detachably fitted thereto.

23. In a type-writing machine, the combination with the flat platen, and the rails or
guides, of a separate and complete work-gage
130 attachment for the platen, arranged to lie outside of the vertical plane of a track or

guide and comprising a work-gage coöperating with a track or guide to aline and hold the work.

24. A work-gage attachment for type-writing machines arranged to lie outside of the vertical plane of a machine rail or guide and comprising a supporting member, and a plurality of alined pins adjustable longitudinally of said supporting member in parallelism
10 with the said rail or guide.

25. In a type-writing machine, the combination with the flat platen, and the machine rails or guides, of a work-gage arranged to lie outside of the vertical plane of a track or
15 guide, and comprising a holding-pin to engage the work.

26. In a type-writing machine, the combination with the flat platen, and the machine rails or guides, of a work-gage arranged to
20 lie outside of the vertical plane of a track or guide, and comprising an adjustable holding-pin to engage the work.

27. In a type-writing machine, the combination with the flat platen, and the machine
25 rails or guides, of a work-gage arranged to lie outside of the vertical plane of a track or guide, and comprising an adjustable holding-pin to engage the work, said pin being ad-

justable in the direction of the length of the track or guide.

28. In a type-writing machine, the combination with the flat platen and the main tracks or guides, of a work-gage disposed outside of the vertical plane of a track or guide and adjustable both laterally and longitudinally of
35 the platen.

29. In a type-writing machine, the combination with the flat platen and the tracks or guides for the traveling machine, of a work-gage attachment comprising a supporting
40 member adjustable laterally, and gage-pins adjustable longitudinally along said member.

30. In a type-writing machine, the combination with a platen, and the main tracks or guides, of a work-gage attachment comprising
45 a support and a plurality of gage-pins, the latter being located outside of the vertical plane of a track or guide to engage the work.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in
50 the presence of two witnesses.

HIRAM JOSEPH HALLE.

Witnesses:

ALBERT E. FEIHL,
A. R. WARNER.