

(No Model.)

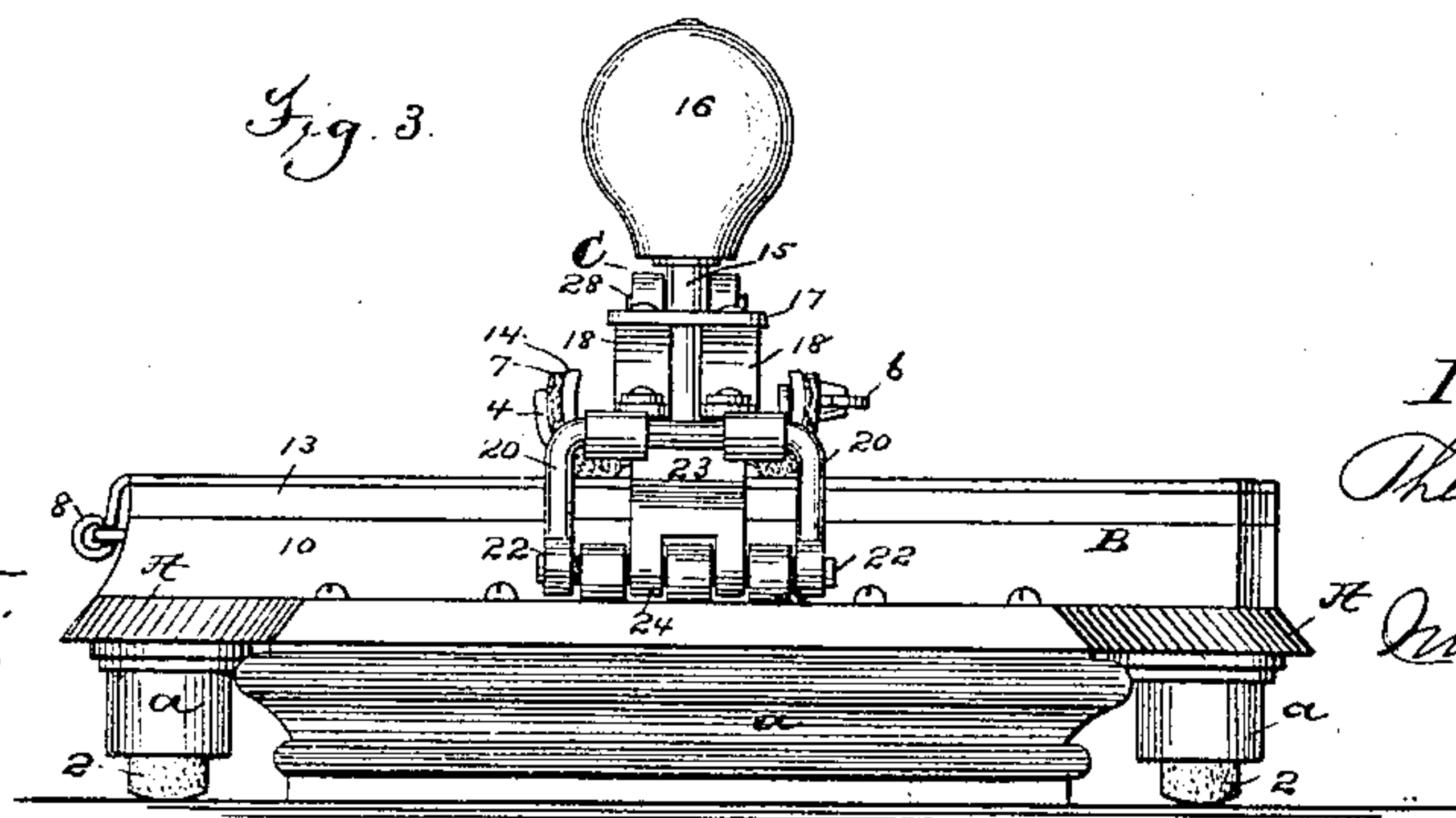
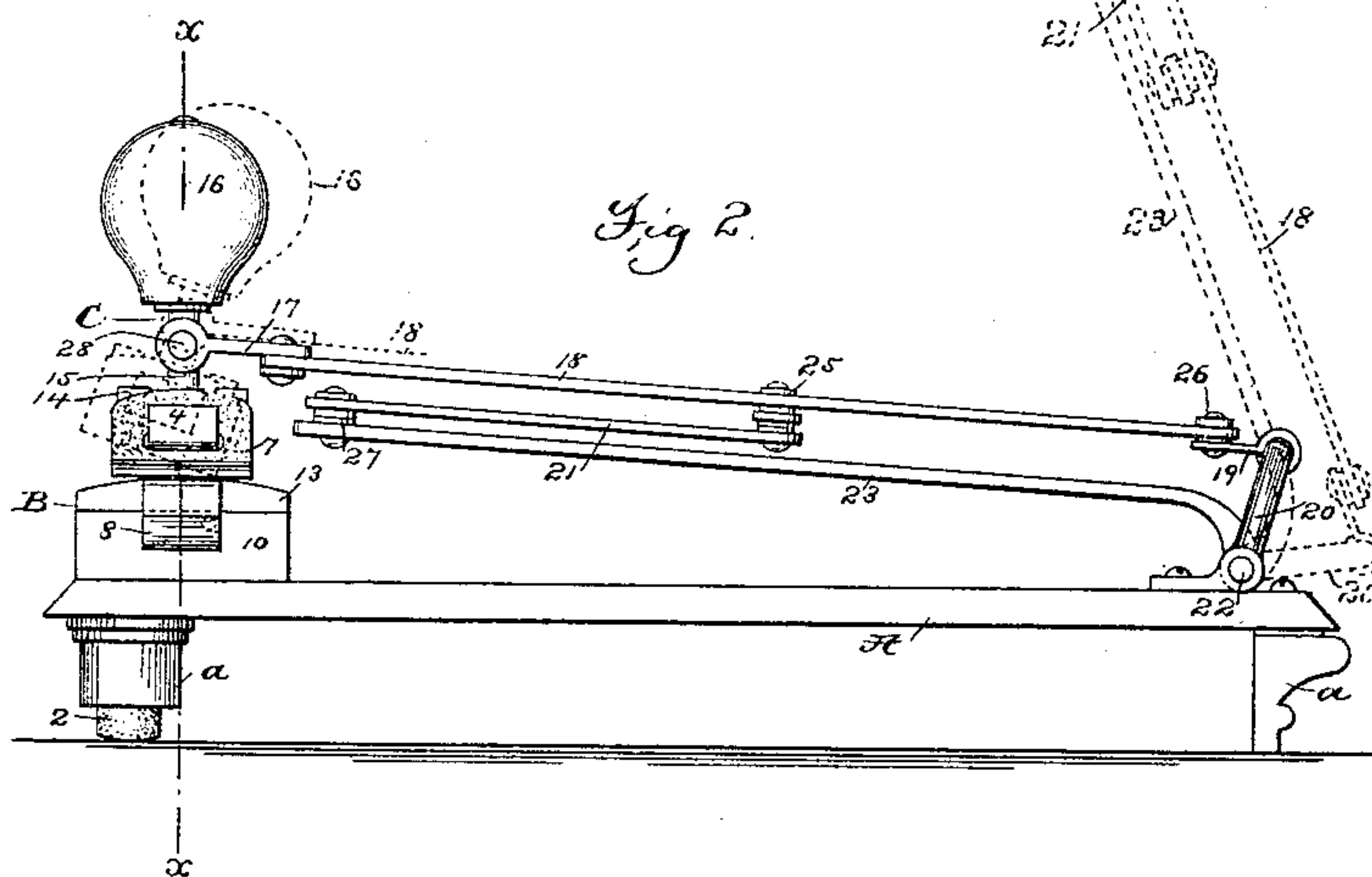
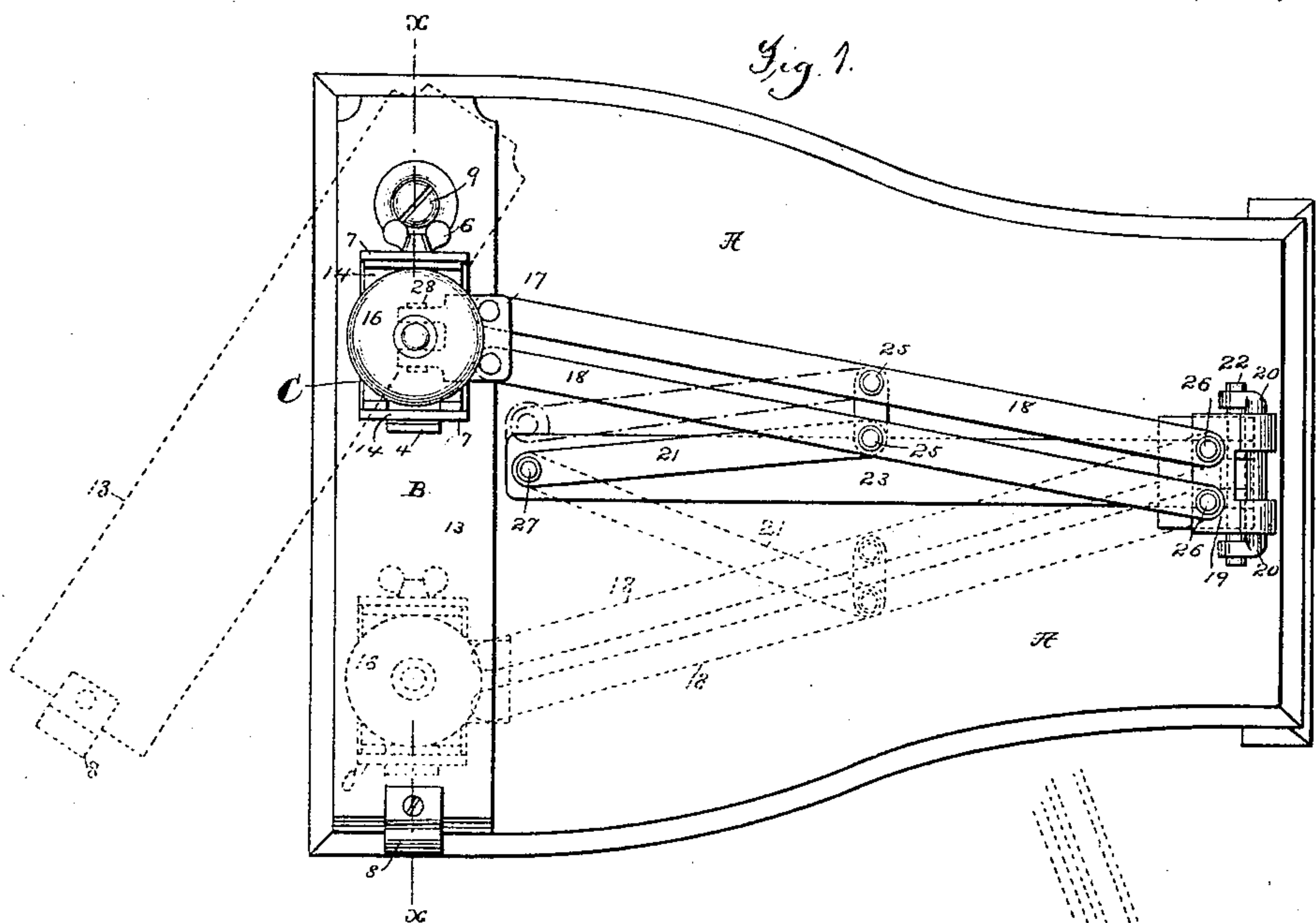
3 Sheets—Sheet 1.

T. B. OSBORNE.

KNIFE CLEANING AND SCOURING APPARATUS.

No. 350,838.

Patented Oct. 12, 1886.



Attest:  
Geo. H. Batts.  
J. A. Heavey

Inventor:  
Theodore B. Osborne  
By  
Quinn & Philipp

Atty's.

(No Model.)

3 Sheets—Sheet 2.

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Fig. 7.

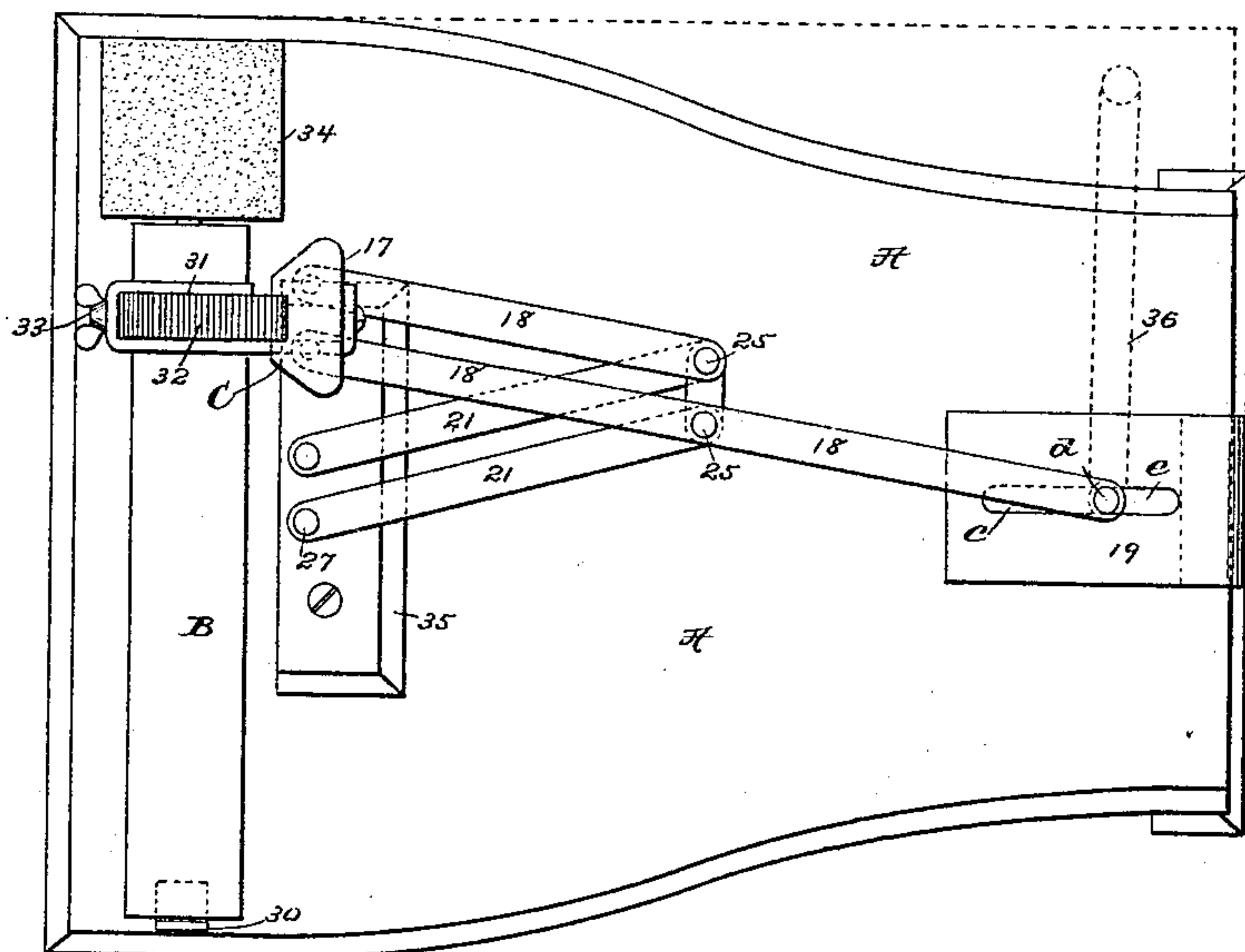


Fig. 8.

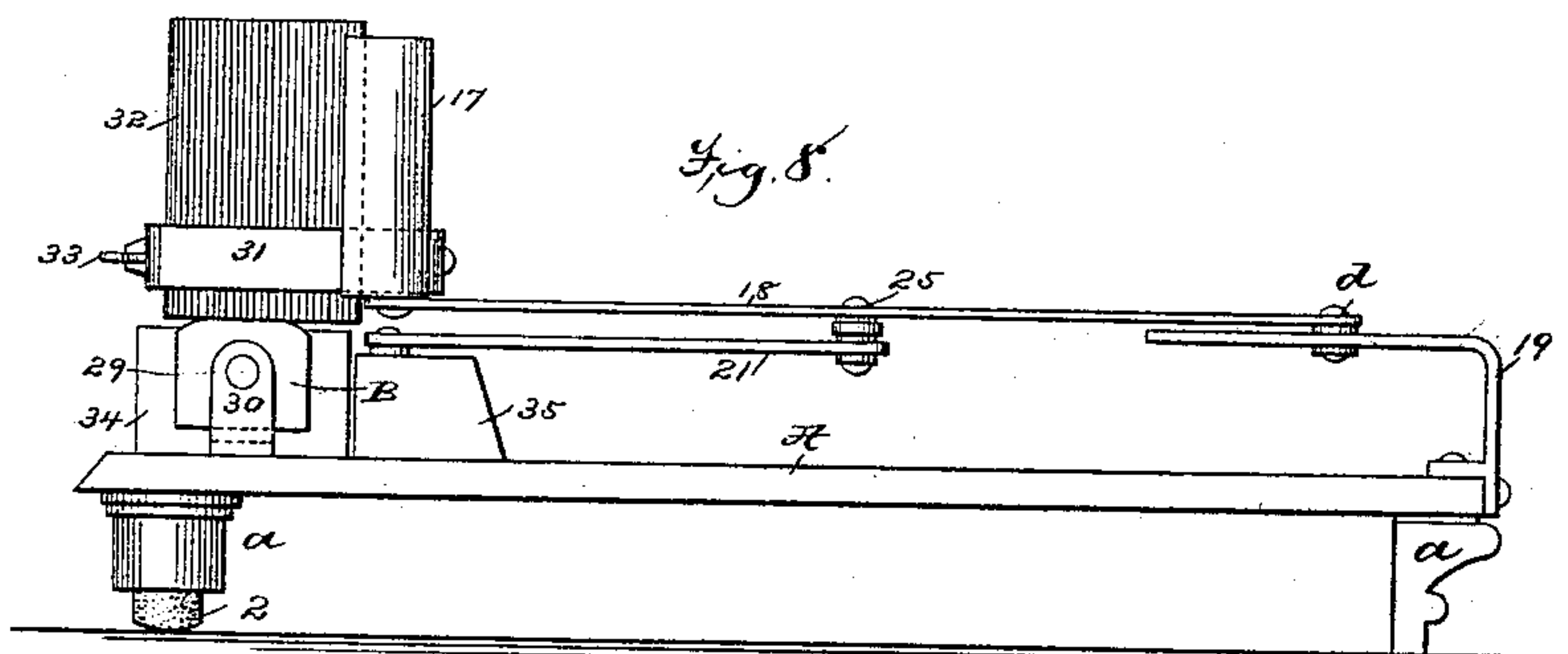
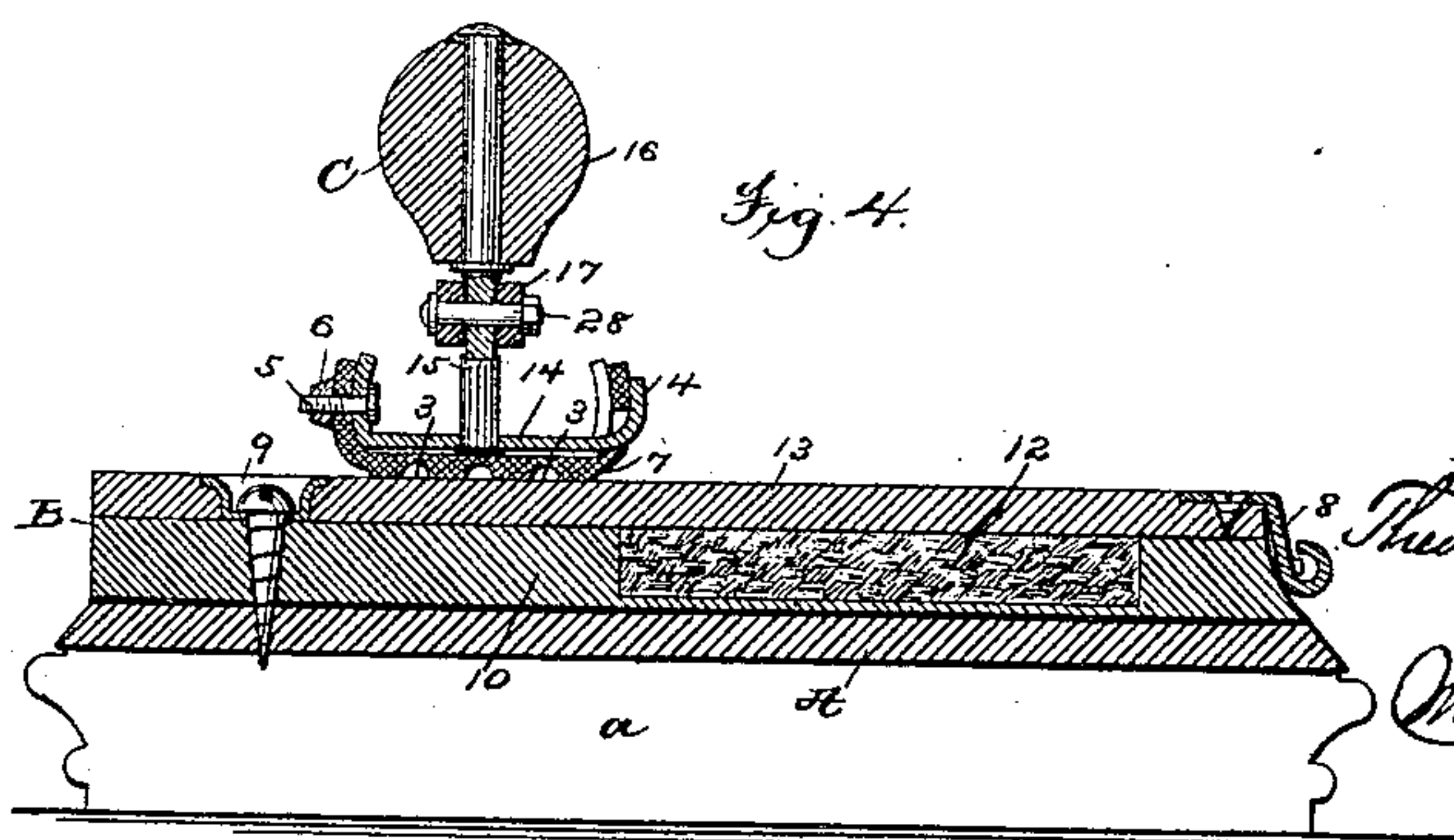


Fig. 4.



Attest:

Geo. H. Otto.

J. A. Heavey

Inventor:

Theodore B. Osborne

by

Murphy & Philipp

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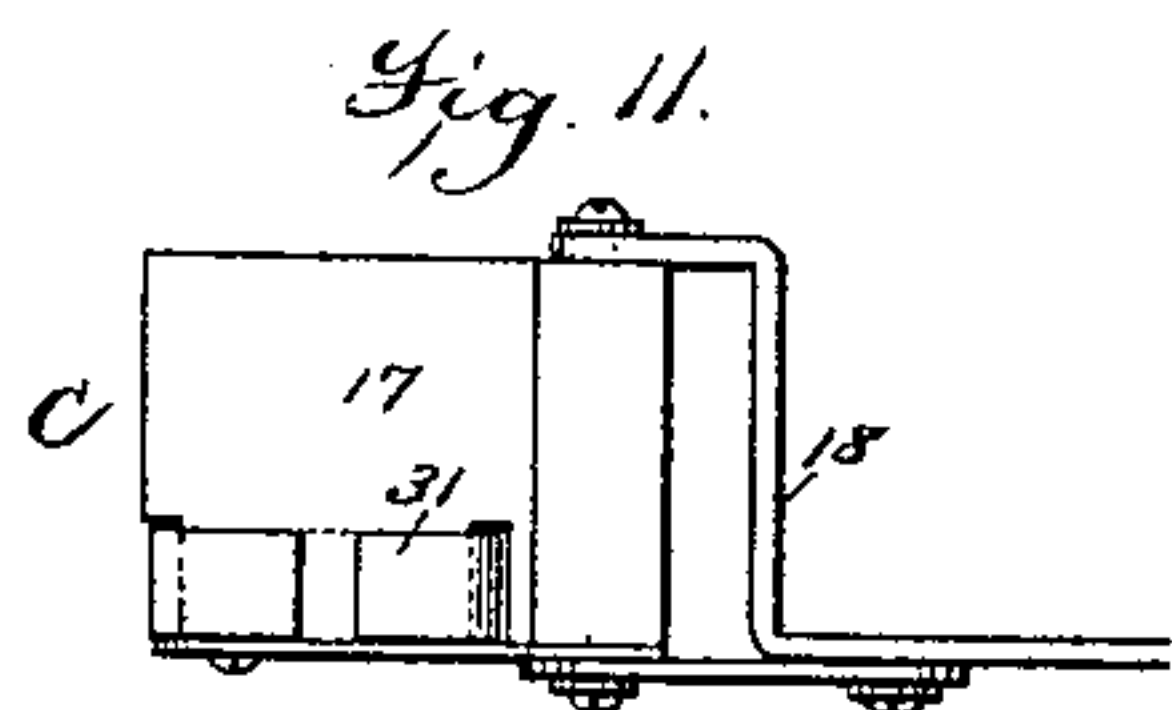
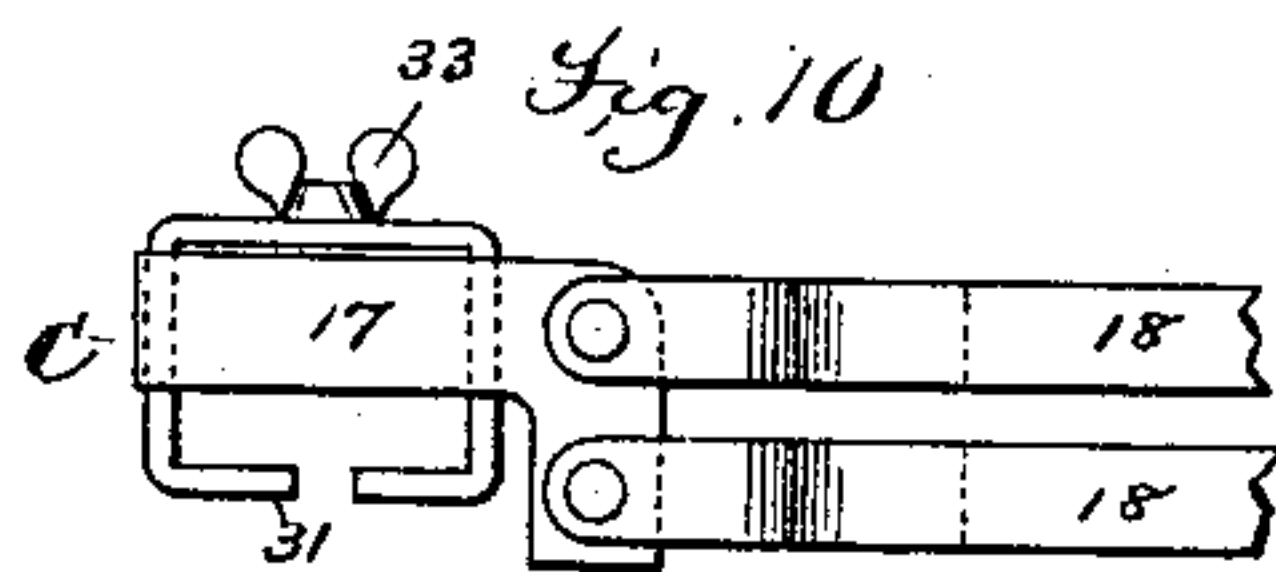
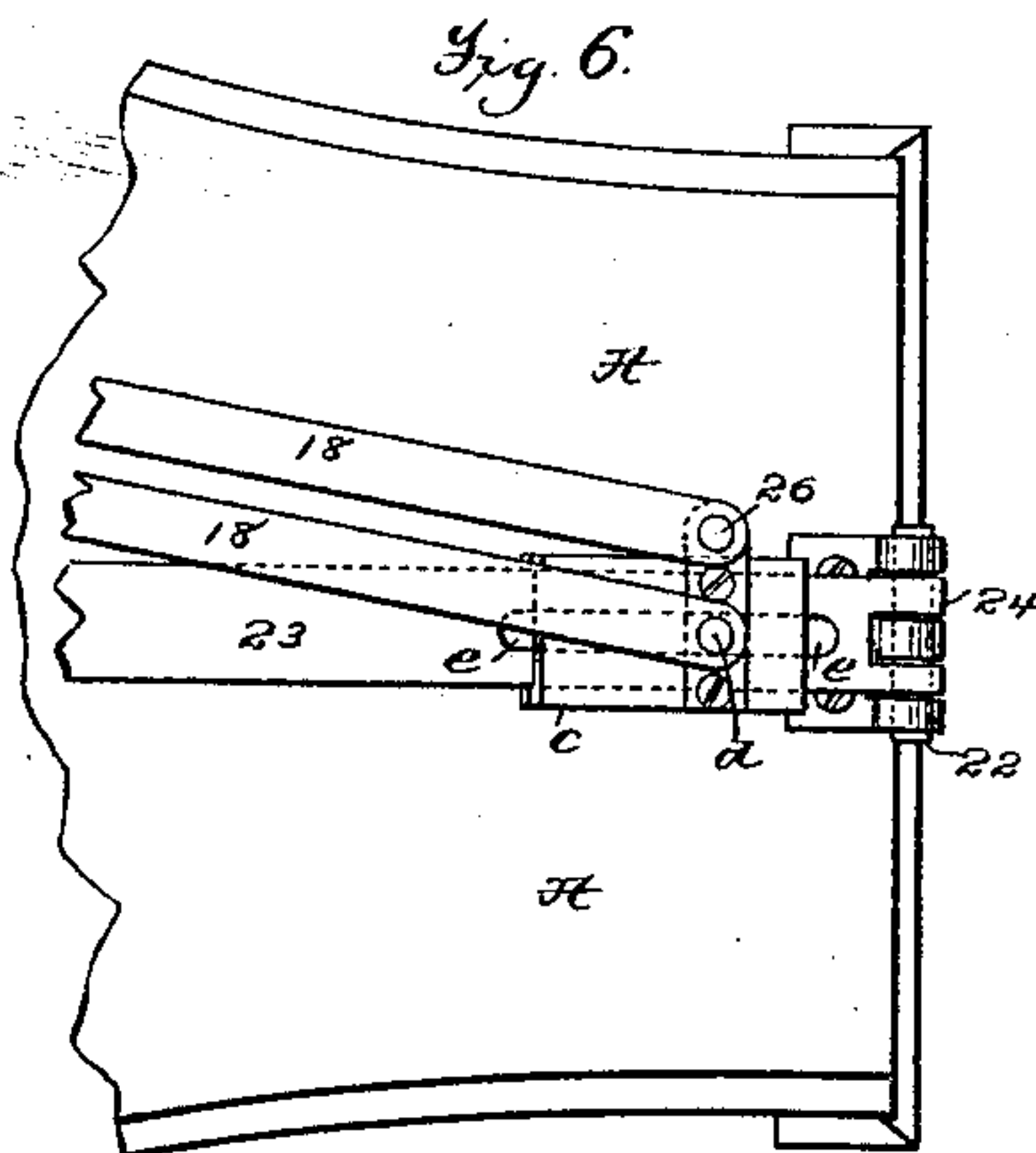
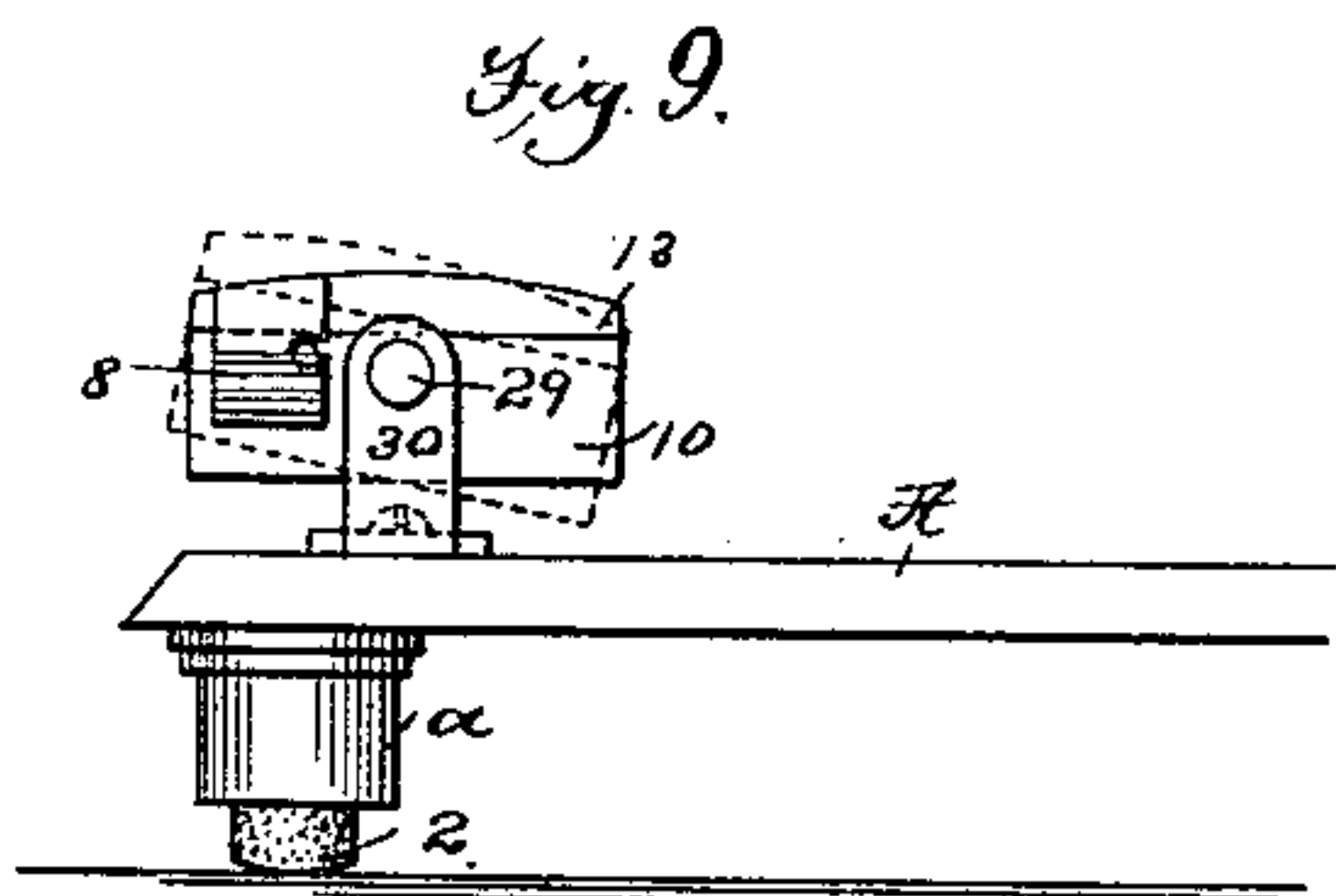
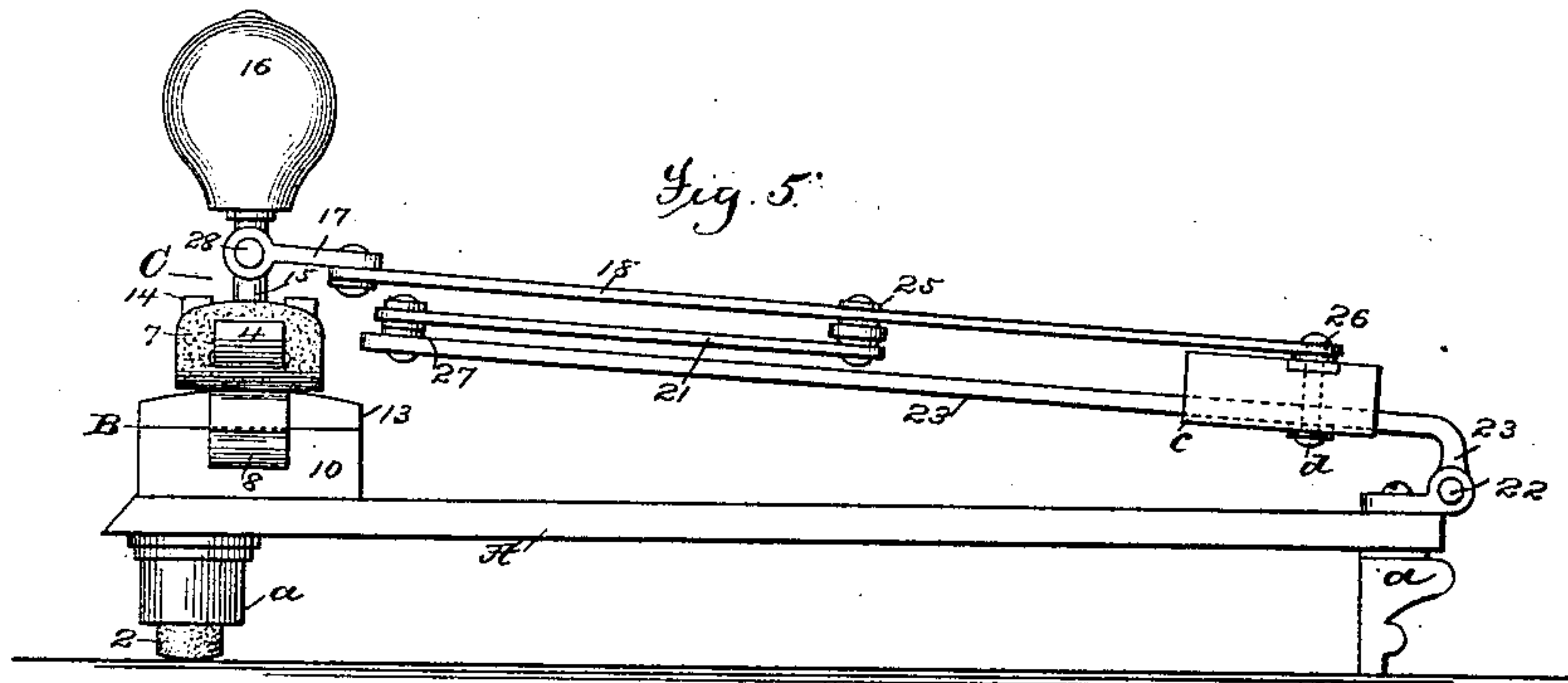
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Attest:  
Geo. H. Botts  
J. A. Heavey

Inventor:  
Theodore B. Osborne  
J. Munson & Philipp

Atty:



# UNITED STATES PATENT OFFICE.

THEODORE B. OSBORNE, OF PLAINFIELD, NEW JERSEY.

## KNIFE CLEANING AND SCOURING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 350,838, dated October 12, 1886.

Application filed April 21, 1886. Serial No. 199,574. (No model.)

*To all whom it may concern:*

Be it known that I, THEODORE B. OSBORNE, a citizen of the United States, residing at Plainfield, county of Union, and State of New Jersey, have invented certain new and useful Improvements in Knife Cleaning and Scouring Apparatus, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

10 This invention relates to an apparatus which is especially adapted for use in cleaning and scouring knives and forks, but which may be employed for other similar purposes.

As a full understanding of the invention can be best imparted by a detailed description of the apparatus in which it is embodied, all preliminary description of the invention will be omitted and a full description given, reference being had to the accompanying drawings, in which—

Figure 1 is a plan or top view of a knife-scouring apparatus embodying the invention in one of its forms. Fig. 2 is a side elevation of the same. Fig. 3 is a rear elevation of the same, looking from the right of Figs. 1 and 2. Fig. 4 is a vertical section taken on the line *x* of Figs. 1 and 2. Fig. 5 is a view similar to Fig. 2, illustrating a modification in certain of the parts, which will be hereinafter explained. Fig. 6 is a partial plan view of the same. Figs. 7 and 8 are views similar to Figs. 1 and 2, illustrating other modifications which will be hereinafter explained; and Figs. 9, 10, and 11 illustrate still other modifications which may be made in certain of the details.

Referring to said drawings, it is to be understood that the apparatus in all of its forms consists, principally, of a supporting base-plate, A, which for convenience will usually be mounted upon legs or standards *a*, a bed or rest, B, upon which the knife or other article rests during the scouring operation, a head, C, for applying the scouring material, which head is arranged to reciprocate over the rest B, and an arrangement of pivoted bars for holding and guiding the head C during the scouring operation. The base-plate A and legs *a* and the knife-rest B may be made of wood or metal, as may be preferred, and the

50 legs *a* will preferably be provided with rub-

ber feet 2, to prevent the apparatus from slipping on the table or other surface upon which it rests when in use; or the legs *a* may be made wholly of rubber.

In the preferred construction, which is illustrated in Figs. 1 to 4, the knife-rest B is rigidly secured to or made integral with the base-plate A, and consists of a base portion, 10, which is provided with a cavity to form a receptacle for the scouring material 12, and a lid or cover portion, 13, which may be either pivoted to the portion 10, as shown at 9, so as to be turned horizontally to one side, as shown by dotted lines in Fig. 1, to permit access to the scouring material 12, or hinged to the portion 10, so as to be swung to one side for the same purpose. The cover portion 13 may be provided with a suitable latch or catch, as 8, by which it can be secured in its closed position.

The scouring-head C, as illustrated in Figs. 1 to 5, which is the preferred form, consists of a metal plate, 14, from the back of which projects a short rod, 15, the upper end of which is provided with a suitable knob or handle, 16, by which it can be conveniently grasped when the apparatus is in use. The plate 14 is provided upon its under side with a slightly-yielding surface or pad, 7, which is preferably formed of a piece of leather having transverse grooves or channels, as 3, in which the scouring material will collect and from which it will be applied to the surface being scoured. The pad 7 is secured to the plate 14 in such manner that it can be readily detached therefrom, so as to be renewed as often as may be necessary. This may be effected in a variety of ways. As shown, in the present case the plate 14 is slit at one end, and its central portion is bent outward to form a hook, 4, which passes through an opening in the end of the pad, while the other end of the plate is provided with a small bolt, 5, which passes through a hole in the pad, and is provided at its outer end with a thumb-nut, 6. With this arrangement, by simply unscrewing the nut 6 and removing the bolt 5, the pad 7 can be removed and another put in its place with little trouble. Any other suitable means may, however, be employed for securing the pad in position, if preferred.



In order to secure the greatest ease and facility in using the apparatus, as well as the best scouring effects, it is necessary that the plate 14, carrying the pad 7, should be capable of oscillating, so as to assume different angles with relation to the rest B to conform to variations in the surface being acted on. It is also desirable that the head C should be so held and guided in its reciprocations that it will not only be moved in a straight line along the knife-blade or other surface being acted on, but will also be prevented from twisting or turning on its axis during its reciprocations. It is also desirable that the scouring-head C should be so held and guided that it can, when desired, be raised and turned back away from the rest B. As shown in Figs. 1 to 4, these several results are secured, as follows: The rod 15 is connected between the plate 14 and handle 16 to a plate, 17, by a pivoted joint, 28, which permits the whole head C to be oscillated in a vertical plane at right angles to the rest B. The plate 17 is pivotally connected to the ends of a pair of horizontal parallel bars, 18, which are pivotally connected at their opposite ends, as shown at 26, to a plate, 19, which in turn is hinged to a vertical yoke, 20, the ends of which are hinged to the base-plate A, as shown at 22. At a point about midway of their length the bars 18, or one of them, are or is pivotally connected, as shown at 25, to one end of a horizontal bar, 21, the opposite end of which is pivotally connected, as shown at 27, to a horizontal bar, 23, which is hinged to the base-plate A, as shown at 24, but is not capable of any horizontal movement. It will be observed that the parts are so proportioned that the distance from the pivots 26 to the pivot 25 is just equal to the distance from the pivot 25 to the pivot 27.

From the construction and arrangement of the parts just described, it results that the head C can be oscillated or rocked, as shown by dotted lines in Fig. 2, so as to cause the plate 14 and pad 7 to assume different angles with relation to the rest B, also that the head C, as it is reciprocated along the knife-blade or other article on the rest B, is always caused to move in a straight line, and is prevented from twisting or turning on its own axis, as shown by dotted lines in Fig. 1, and also that the head C and its connections can be readily turned upward away from the rest B, when desired, as shown by dotted lines in Fig. 2.

The manner of using the cleaning and scouring apparatus thus constructed is as follows: To supply the pad 7 with the scouring material, the cover portion 13 of the rest B is turned to one side, as shown by dotted lines in Fig. 1, so as to uncover the receptacle containing the scouring material 12. The head C can then be moved into position over the receptacle containing the scouring material, and the pad 7 pressed down onto the material, so as to take up a portion of the same. The scouring material 12 may be any suitable paste or powder which is adapted for cleaning, polishing, or

scouring purposes. After the pad 7 has been supplied with the scouring material, the cover portion 13 will be restored to its original position. The knife-blade or other article to be cleaned or scoured will then be laid on the rest B, and the head C will be grasped by the handle 16 and moved back and forth, so as to carry the pad 7 along the surface to be scoured. As the head C is moved back and forth along the rest B, the parallel bars 18 will prevent it from twisting or turning upon its axis, so that the sides of the plate 14 and pad 7 will always be kept parallel with the rest B, and the bars 23 21 and the hinged yoke 20 will so guide the head that it will be caused to move in a straight line along the rest. As the head C is moved back and forth along the rest, it can, if necessary, be oscillated on the pivot 28, as shown by dotted lines in Fig. 2, so as to cause the pad 7 to take different positions with relation to the rest, and thus accommodate itself to the surface being acted upon. The hinges 22 24 allow the head C to move up and down freely, and thus accommodate itself to articles of varying thicknesses, and these hinges also permit the head and its connections to be turned upward, entirely away from the rest B, when it is desired to do so, as shown by dotted lines in Fig. 2.

Although the structure illustrated in Figs. 1 to 4 embodies the invention in what I regard as the best form, yet this structure may be modified in many particulars without materially changing its mode of operation, and it may be modified in many other particulars, and yet preserve certain features of the invention.

Some of the many modifications which may thus be made are illustrated in Figs. 5 to 11. The construction shown in Figs. 5 and 6 varies only slightly from that already described, the only difference being that the plate 19, to which the rear ends of the bars 18 are pivoted, instead of being hinged to a vertically-arranged yoke, 20, is arranged to slide in and out on the bar 23, it being held and guided on the bar by flanges *c* and by a pin, *d*, passing through a slot, *e*, in the bar, or in any other suitable manner. In this case, the bar 23 is extended slightly farther to the rear, in order to provide sufficient room for the necessary movement of the plate or head 19. This construction provides for exactly the same movements of the head C as that first described, and in some cases may be found equally or more desirable. It is also to be remarked that in either of the constructions already described, instead of having both of the bars 18 extend from the plate 17 to the plate 19, one of the bars may extend only from the plate 17 to the pivot 25; but in such case a second bar, 21, will be provided, as indicated by broken lines in Fig. 1.

Where the head C is arranged to oscillate, as shown in Figs. 1 to 5, it will usually be preferable to have the knife-rest B fixed to the base-plate, as shown in said figures. In



some cases, however, it may be desirable to have the head C fixed in the plate 17, so that it will not be capable of oscillating, and in such case the knife-rest B may be mounted on trunnions, as 29, which enter standards, as 30, rising from the base-plate, as shown in Figs. 7, 8, and 9. By this means the knife-rest is allowed to rock, as indicated by dotted lines in Fig. 9, so as to properly present the article to the pad 7 to be acted on. In some cases it may be desirable to have the knife-rest arranged in this manner, even where the head C is pivoted, as shown in Figs. 1 to 5, and this of course can readily be done.

In some cases, especially where the apparatus is designed for some particular class of work, it may not be necessary or desirable to have either the knife-rest or the head C arranged to oscillate, and it is to be understood, therefore, that this feature may be wholly omitted and yet preserve certain important features of the invention.

In some cases it may be preferred that the head C, instead of being provided with the pad 7 for applying the scouring material, may be constructed to carry a solid scouring material, such as a small brick. In such case the solid scouring material may be secured to the under side of the plate 14 in any convenient manner. Where a solid scouring material is used, it will of course not be necessary to provide a receptacle in the knife rest B for the scouring material, and the rest can therefore in such case consist of a simple solid block of wood or metal. Where a solid scouring material is used, it will usually be preferable that the knife-rest B should be arranged to oscillate, as already described, and that the head C should be incapable of oscillation. It will therefore in such case be preferable to have the head C constructed in a manner somewhat different from that already described. In such case also it will not be so important that the head C and its connections should be capable of being raised or turned up away from the rest B, and this feature may therefore be omitted.

In Figs. 7 and 8 a construction is illustrated which embodies the modifications just indicated. In this case the knife-rest B is a simple block of wood or metal, which is hung on trunnions 29, as before described. The head C consists of a vertical block, 40, to which the ends of the bars 18 are pivoted the same as to the plate 17 in the construction before described. The block 40 is provided upon its front side with a clamp, 31, which is of suitable size and form to receive a brick, 32, of suitable solid scouring material, and is provided with a clamping-screw, 33, by which the brick is held in position. One of the bars 18 terminates at the pivot 25, as before described, and the other, instead of being pivoted to the plate 19, is provided with a stud, *d*, which passes through and moves to and fro in a slot, *e*, in a bracket, 39, which is rigidly secured to the base-plate A. The bar 23 is omitted, and

the bars 21—there being two of these bars, as before described—are pivoted at their front ends to a fixed block, 35. The manner of using the apparatus when thus organized is substantially the same as already described. The head C and its connections cannot, however, be turned up away from the knife-rest. Where the brick 32 of scouring material is used, the apparatus will preferably be provided with an abrading-surface, as 34, located at the end of the knife-rest, upon which the lower end of the brick can be rubbed to renew its surface when it has become glazed by use. By loosening the screw 33 the brick 32 can be adjusted downward as it is worn away. It is to be remarked that in this construction the bar 18, instead of being guided by the slot *e* in the bracket 39, may be pivoted to one end of a laterally-extending bar, 36, the opposite end of which is pivoted to a stud rising from the base-plate A, as shown by dotted lines in Fig. 7. Such a bar, 36, will serve to guide the bar 18 in substantially the same manner as the slot *e*. When the bar 36 is employed, the base-plate A will of course have to be enlarged somewhat, as indicated by the dotted lines. The head C, instead of being of the form shown in Figs. 7 and 8, may, if preferred, be of the form shown in Figs. 10 and 11. In this case the block 40 is of the L form, and the clamp 31 is arranged to clamp the side instead of the edge of the brick 32 against the block.

It will readily be understood that the form of scouring head shown in Figs. 1 to 5 may be used in connection with the form of holding and guiding bars shown in Figs. 7 and 8; or that the forms of head shown in Figs. 7, 8, 10, and 11 may be used in connection with the form of holding and guiding bars shown in Figs. 1 to 6.

The several ways of arranging the bars for holding and guiding the scouring-head which are shown and described are regarded as the best for the purpose, because by these arrangements of the bars the head is not only held and guided in a straight line along the knife-rest, but is prevented from turning or twisting on its axis. The former of these results, which is by far the most important, will be secured when only one of the bars 18 is employed, the second bar 18 being provided merely for the purpose of securing the second result. It is therefore manifest that one of the bars 18 may be omitted and yet preserve the most important feature of the invention.

What I claim is—

1. The combination, with the scouring-head C, arranged to be reciprocated along the knife-blade or other article to be scoured, of a pivoted bar, 18, arranged to hold and guide the head during its reciprocations, said bar having a longitudinal movement, whereby the head is guided in a straight line, substantially as described.

2. The combination, with the scouring-head C, arranged to be reciprocated along the knife-



blade or other article to be scoured, of the pivoted parallel bars 18, arranged to hold and guide the head during its reciprocations, substantially as described.

5 3. The combination, with the scouring-head C, arranged to be reciprocated along the knife-blade or other article to be scoured, of the pivoted parallel bars 18, arranged to hold and guide the head during its reciprocations, said  
10 bars having a longitudinal movement, whereby the head is guided in a straight line, substantially as described.

4. The combination, with the scouring-head C, arranged to be reciprocated along the knife-blade or other article to be scoured, of a pivoted bar, 18, arranged to hold and guide the head during its reciprocations, and a pivoted bar, 21, for giving a longitudinal movement to the bar 18, substantially as described.

20 5. The combination, with the scouring-head C, arranged to be reciprocated along the knife-blade or other article to be scoured, of the pivoted parallel bars 18, arranged to hold and guide the head during its reciprocations, and  
25 the pivoted bar 21, for giving a longitudinal movement to the bars 18, substantially as described.

6. The combination, with the scouring-head C, arranged to be reciprocated along the knife-blade or other article to be scoured, of a pivoted bar, 18, arranged to hold and guide the head during its reciprocations, the pivoted bar 21, for giving a longitudinal movement to the bar 18, and the hinged bar 23, whereby the  
30 head is guided in a straight line during its reciprocations and is permitted to have a vertical movement, substantially as described.

7. The combination, with the scouring-head C, arranged to be reciprocated along the knife-blade or other article to be scoured, of the pivoted parallel bars 18, arranged to hold and guide the head during its reciprocations, the  
40

pivoted bar 21, for giving a longitudinal movement to the bars 18, and the hinged bar 23, whereby the head is guided in a straight line during its reciprocations, is prevented from turning on its axis, and is permitted to have a vertical movement, substantially as described. 45

8. The combination, with the reciprocating scouring-head C, pivoted so as to oscillate in a vertical plane, of a pivoted bar, 18, arranged to hold and guide the head during its reciprocations, said bar having a longitudinal movement, and being hinged, whereby the head is guided in a straight line during its reciprocations, and is permitted to have a vertical movement, substantially as described. 50 55

9. The combination, with the reciprocating scouring-head C, pivoted so as to oscillate in a vertical plane, of the pivoted parallel bars 18, arranged to hold and guide the head during its reciprocations, said bars having a longitudinal movement and being hinged, whereby the head is guided in a straight line during its reciprocations, is prevented from turning on its axis, and is permitted to have a vertical movement, substantially as described. 60 65

10. The combination, with the reciprocating scouring-head C, and the pivoted bars for holding and guiding the head, of the knife-rest B, containing a receptacle for the scouring material, substantially as described. 70

11. The combination, with the reciprocating scouring-head C, and the pivoted bars for holding and guiding the same, of the removable pad 7, substantially as described. 75

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

THEODORE B. OSBORNE.

Witnesses:

JAMES A. HOVEY,

JAS. J. KENNEDY.