

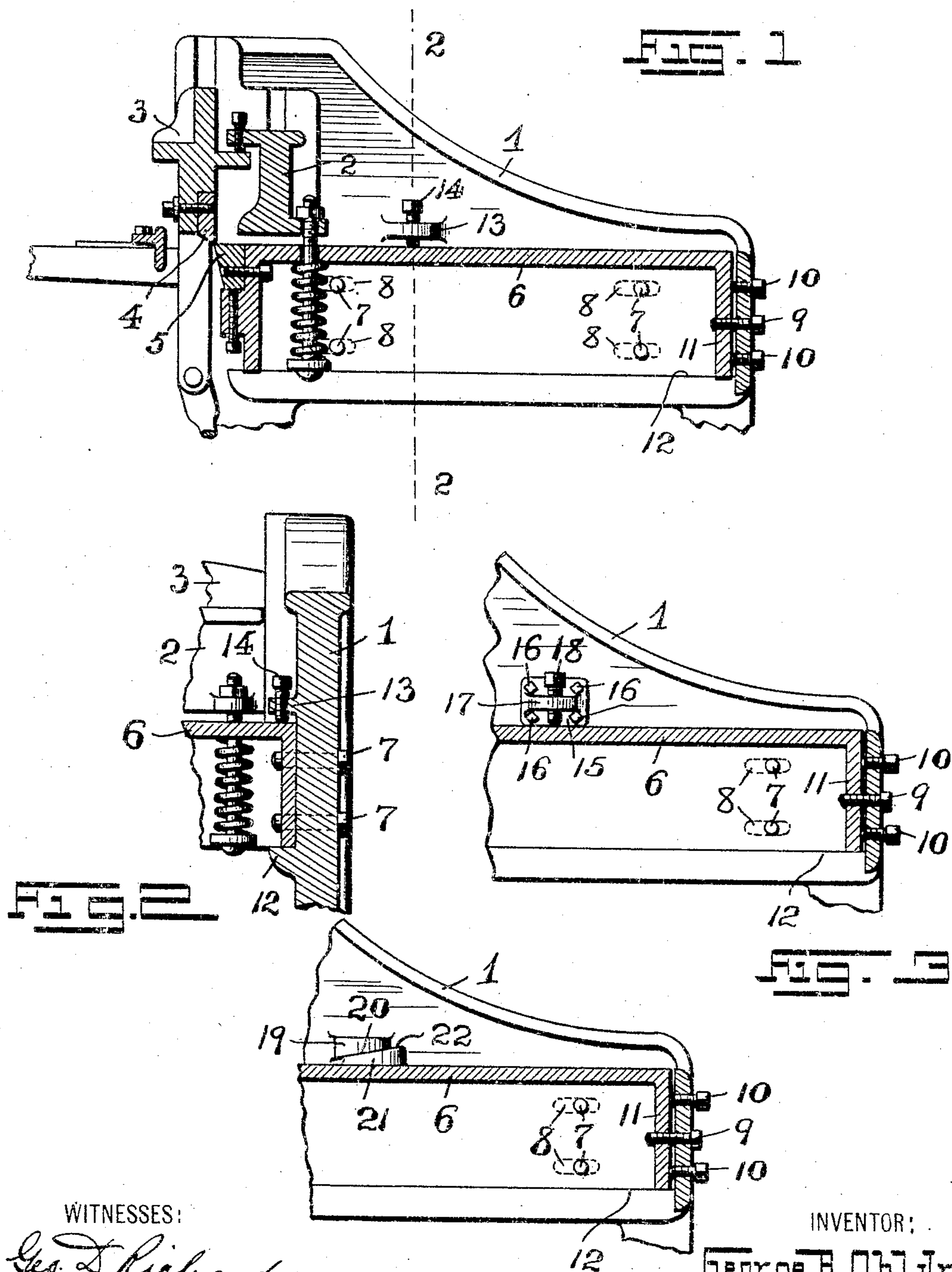
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G. A. OHL, JR.

MEANS FOR PREVENTING TIPPING OF TABLES OF MACHINES.

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WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## MEANS FOR PREVENTING TIPPING OF TABLES OF MACHINES.

SPECIFICATION forming part of Letters Patent No. 786,592, dated April 4, 1905.

Application filed September 21, 1904. Serial No. 225,328.

*To all whom it may concern:*

Be it known that I, GEORGE A. OHL, Jr., a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Means for Preventing Tipping of Tables of Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to numerals of reference marked thereon, which form a part of this specification.

My present invention is in the nature of improvements generally in that class of machines which are provided with an independent and separately-made table or bed which is suitably supported between the solid or gap housings of the frame of the machine and used generally with foot and power shears, in which great force or power are brought upon the said table or bed.

The present invention has for its principal object to provide, in connection with the solid or gap housings or side frames of such machines and with the table or bed which is supported between said housings or end frames, a suitable holding device or means, whether in the form of a screw, wedge, or other mechanical equivalent, arranged upon the side of the housing or side frame and in contact with a portion of the table or bed to prevent even the slightest possible tipping or tilting movement of said table or bed when pressure is brought upon the said table or bed, and especially along its front marginal edge, as in foot and power shears.

A further object of this invention is to use in connection with that class of metal-shearing machines represented in United States Letters Patents Nos. 680,937 and 765,953 a means for preventing any possible tipping movement of the work-supporting table or bed and also to remove all danger of shearing off the usual cap-screws used in the back and sides of the table or bed and the frame of the machine.

Other objects of this invention not at this

time more particularly specified will appear from the following detailed description of my present invention.

With these various objects in view this invention consists, primarily, in the novel arrangements and combinations of the various devices and parts, as well as in the details of the construction of the same, all of which will be hereinafter more fully described and then finally embodied in the clauses of the claim, which are appended to and which form an essential part of this specification.

The invention is clearly illustrated in the accompanying drawings, in which—

Figure 1 is a transverse vertical section of the upper portion of a power shears or cutting apparatus provided with the table or bed engaging means for preventing its tipping or tilting movement; and Fig. 2 is a transverse vertical section of the same, said section being taken on line 2 2 in said Fig. 1. Figs. 3 and 4 are detail views of modified forms of table or bed engaging means embodying the principles of my present invention.

Similar characters of reference are employed in the above-described views to indicate corresponding parts.

In the said drawings the reference character 1 indicates the upper portion of any suitable form of housing, whether solid or gapped, which is provided with the usual clamping-leaf 2, a shearing-head 3, and knife or cutter 4, moving against the knife-blade or shear member 5, suitably arranged in its operative position along the forward edge of the table or bed 6. This table or bed 6 is of the usual construction represented in said Letters Patent numbered 680,937 and 765,953 and is supported between the end housings of the machine, preferably as shown and described in said patent numbered 680,937, by means of cap-screws 7, which extend into and through the slotted portions 8 in the housings, and by means of cap-screws 9 and set-screws 10, respectively screwed into and against the holding member 11 of the said table or bed.

It has been found in practice, and especially when the machine is doing very heavy work, that with constant use the table or bed will



receive a tipping or tilting motion, in time causing the shearing away of the cap-screws and after each shear or cut allowing the table or bed to drop back upon the supports 12 with a bang and also to the detriment of the general construction of the machine. To overcome this objectionable feature and the said tipping or tilting movement of the said table or bed 6 is the main purpose of this invention, and this I have accomplished by providing the housing 1 at any desired point with a lug or projection 13, which is provided with a screw-hole in which is arranged a set-screw 14. Thus after the table or bed has been properly adjusted and is secured in its supported position between the housings of the machine the lower end of the set-screw 14 is brought down tightly upon the table or bed, whereby all possible upward tipping or tilting movement and the shearing of the cap-screws is entirely overcome.

The arrangement of the set-screw 14 is such that with the use of the machine said screw can from time to time be adjusted to firmly hold down the table or bed.

Instead of providing the housing with an integrally-connected projection 13, as indicated in Figs. 1 and 2 of the drawings, a bracket 15 may be secured against the housing by means of bolts or screws 16, the said bracket having a shelf 17 formed with a screw-hole in which the set-screw 18 is arranged, as illustrated in Fig. 3 of the drawings, and operates in the manner hereinabove described. In lieu of either of these forms of stops or table-engaging devices the housing may be provided with a lug or projection 19, having its under surface 20 made with a taper, preferably in an upward direction, from the front to the rear of the machine, the table or bed being formed with a correspondingly-shaped wedge 21, having an inclined face 22, which is in firm holding engagement with the surface 20 of the said lug or projection 19, as shown in Fig. 4, when the said table or bed is in its adjusted and fixed position between the housings of the machine.

From the foregoing description of my invention it will be clearly seen that I have devised a useful and simple means for the purposes of my invention which can be made integral with the housing of the machine, or the device may be made separate from the housing to be bolted in position, whereby machines already in actual use can be provided with a means for preventing the tipping or tilting motion of the bed or table, and these devices may be used with any kinds of housings for various classes of machines, as will be clearly understood.

I am aware that changes may be made in the arrangements and combinations of the various devices and their parts without departing from the scope of my present invention. Hence I do not limit my invention to the ex-

act arrangements and combinations of the devices and parts as set forth in the foregoing specification and as illustrated in the accompanying drawings, nor do I confine myself to the exact details of the construction of the said parts.

Having thus described my invention, what I claim is—

1. The combination, with a housing and a work-supporting table of a machine, of means connected with the said housing extending over the upper face of said table and arranged to engage a part of said upper face of the table to prevent tipping of the same, substantially as and for the purposes set forth.

2. The combination, with a housing and a work-supporting table of a machine, of means constructed to engage a part of said table to prevent tipping of the table, consisting, essentially, of a lug extending from said housing and a screw-bolt arranged in a screw-hole of said lug, substantially as and for the purposes set forth.

3. The combination, with a housing and a work-supporting table of a machine, of head-screws for securing said table in its supported relation to said housing, and means for preventing the tipping of said table and also preventing the shearing of said head-screws, substantially as and for the purposes set forth.

4. The combination, with a housing and a work-supporting table of a machine, of head-screws for securing said table in its supported relation to said housing, and means for preventing the tipping of said table and also preventing the shearing of said head-screws, consisting, essentially, of a lug extending from said housing and a screw-bolt arranged in a screw-hole of said lug, substantially as and for the purposes set forth.

5. In a shearing-machine, the combination with a housing, of a work-supporting table, a shear member connected with said table, a clamping-leaf, a shearing-head provided with a knife or cutter, and means constructed to engage a part of said table to prevent tipping of the table, substantially as and for the purposes set forth.

6. In a shearing-machine, the combination with a housing, of a work-supporting table, a shear member connected with said table, a clamping-leaf, a shearing-head provided with a knife or cutter, and means constructed to engage a part of said table to prevent tipping of the table, consisting, of a lug extending from said housing and a screw-bolt arranged in a screw-hole of said lug, substantially as and for the purposes set forth.

7. In a shearing-machine, the combination, with a housing, of a work-supporting table, head-screws for securing said table in its supported relation to said housing, a shear member connected with said table, a clamping-leaf, a shearing-head provided with a knife or cutter, and means for preventing the tipping of



said table and also preventing the shearing of said head-screws, substantially as and for the purposes set forth.

8. In a shearing-machine, the combination,  
5 with a housing, of a work-supporting table,  
head-screws for securing said table in its supported relation to said housing, a shear member connected with said table, a clamping-leaf,  
a shearing-head provided with a knife or cutter,  
10 and means for preventing the tipping of said table and also preventing the shearing of

said head-screws, consisting, essentially of a lug extending from said housing and a screw-bolt arranged in a screw-hole of said lug, substantially as and for the purposes set forth. 15

In testimony that I claim the invention set forth above I have hereunto set my hand this 20th day of September, 1904.

GEORGE A. OHL, JR.

Witnesses:

AUGUST A. BERGHOF,  
FREDK. C. FRAENTZEL.