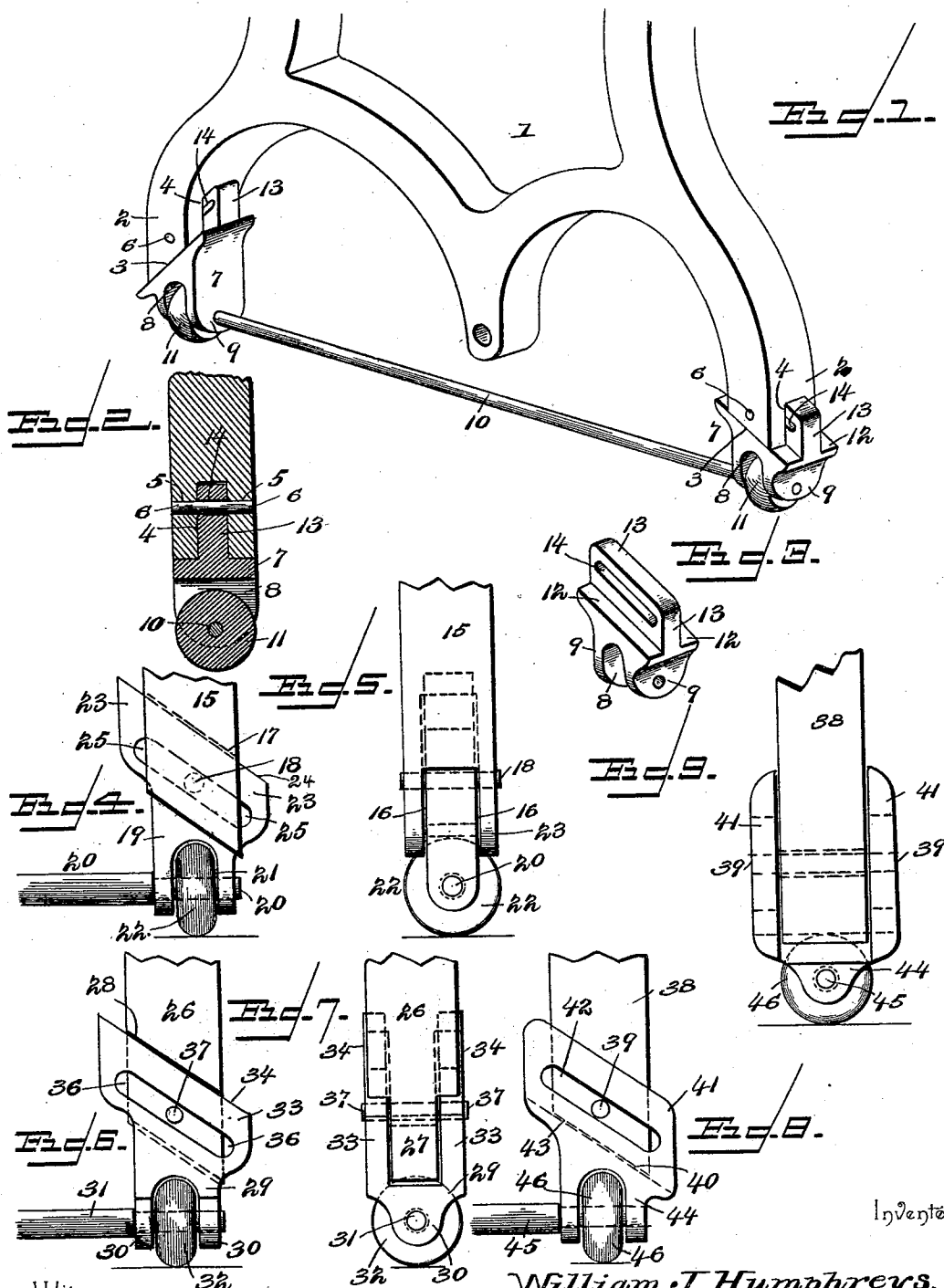


(No Model.)

W. J. HUMPHREYS.
CONSTRUCTION OF LEGGED ARTICLES.

No. 520,432.

Patented May 29, 1894.



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CONSTRUCTION OF LEGGED ARTICLES.

SPECIFICATION forming part of Letters Patent No. 520,432, dated May 29, 1894.

Application filed July 8, 1893. Serial No. 479,930. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM JACKSON HUMPHREYS, a citizen of the United States, residing at Crozet, in the county of Albemarle and State of Virginia, have invented a new and useful Construction of Legged Articles, of which the following is a specification.

My invention relates to an anti-tipping device for legged articles.

The invention is particularly applicable to type-writer-tables, sewing-machine tables, &c., though as will hereinafter appear, it may be employed in connection with any kind of legged article subject to movement over uneven floors. It is well known that nearly all floors are to a greater or less degree uneven and hence such articles as sewing-machine and typewriting-tables designed to sit firm and steady will tip or rock. In the case of sewing-machines this is a source of great annoyance, in that the constant rocking and jarring is injurious to the machine; and, furthermore, causes the machine to run heavy. It is also the case in typewriters, wherein the tipping of the table causes an unsteady and inaccurate stroke and oftentimes causes the operator to miss the key in rapid writing and contact with a different key.

The objects of my invention are to overcome these above named objections and disadvantages and to provide a support for any legged article wherein it is used as desired, the same being so constructed as to automatically adapt itself or conform to any variations in the floor upon which it is supported.

With these and other objects in view the invention consists in certain features of construction hereinafter specified and particularly pointed out in the claims.

Referring to the drawings:—Figure 1 is a perspective view of one end of what may be a typewriter or sewing-machine table having my attachment applied thereto. Fig. 2 is a vertical transverse sectional view thereof. Fig. 3 is a detail in perspective of one of the castings at the end of the attachment. Figs. 4 and 5 are front and side elevations respectively, of a modification. Figs. 6 and 7 are side and front elevations respectively of a second modification. Figs. 8 and 9 are similar views of a third modification.

Like numerals of reference indicate like parts in all the figures of the drawings.

In the present instance 1 designates the metal standard at the end of a typewriter or sewing-machine table, which for the purpose of illustration I have shown my invention as applied to, and the lower ends or feet 2 of this standard, in the present instance, are inclined in opposite directions or beveled as indicated at 3 and furthermore are slotted as at 4. The opposite walls of the slot have transverse perforations 5. Through the walls of each slot is passed a transverse guide-pin 6, the pin being fixed in position.

The attachment consists of two castings designated as 7 in the present instance. Each casting has its lower end bifurcated as at 8, the opposite bifurcations being provided with transversely opposite bearings 9. These bearings receive a transverse connecting-rod 10 which between the bifurcations serves as a journal for caster-wheels 11. The body-portion of each casting above its bifurcation is provided with inclined shoulders 12, and between the same there rises a vertical flange or web 13, which is provided with an inclined longitudinal slot 14, the same being parallel with the inclined shoulders 12, which lie at opposite sides of the web. While the pins 6 are fast in the walls of the bifurcations 4 of the feet 2 the intermediate portions of the pins are loose in the slots 14 of the castings so that said castings are free to move up or down. The inclined shoulders of the two castings are inclined opposite to each other and in the present instance have their inclined shoulders facing outward. It will be understood that the opposite standard 1 of the table or other article may be provided with ordinary casters.

The operation of the attachment will be readily apparent from the foregoing description, but may be briefly stated as follows:—If at any time one of the caster wheels 11 enters a depression in the floor it will be seen that the weight is immediately thrown upon the remaining foot of the standard, which causes it to descend down the inclined shoulders at that side thereof, the beveled ends of the feet moving over the inclined shoulders in a manner that will be obvious. This op-

eration is continued until the standard finds its level, at which time it will be seen that the downward movement of one foot upon its casting will be compensated for by an upward movement of the opposite foot upon its casting. The castings may be disconnected and act independently if desired. The rod 31 in the present instance is merely employed as a connecting rod and axle for the caster wheels as a matter of economy and convenience. In this manner it will be seen that the table can at all times be maintained against tipping or rocking being automatic in its action and requiring no adjusting upon the part of the operator to secure the same.

It will be obvious that by my attachment when one corner or foot enters a depression the pressure will become distributed evenly to the four feet. The angle of inclination between the two surfaces of each attachment is slightly less than the angle of friction, and hence the two castings will crush before they would slip.

In Fig. 4, 15 designates the foot of the standard, which is provided with a bifurcation 16, the upper end of which is inclined as at 17. The bifurcation is provided with opposite openings in which a transverse guide-pin 18 is located. The casting 19 is intended to be connected to a companion casting, not shown, through the medium of the connecting-rod 20, which at one end passes through the bifurcation 21 with which the casting is provided and serves as a journal for a caster-wheel 22. The casting is provided upon its upper side with a web 23 which enters between the bifurcations 16 and is provided upon its upper side with an inclined face 24 which is designed to receive and correspond with the inclined bottom 17 of the recess 16. The web is further provided with an inclined slot 25, and through the same extends the guide pin 18 as in the present instance. It will be seen that the only difference between this construction and the one previously described is that the shoulders are omitted and the upper end of the web serves the function of the same.

In Figs. 6 and 7, wherein I have shown a second modification, 26 designates the foot which in the present instance is not slotted or bifurcated but is reduced at its opposite sides to form a central tenon or web and produces at opposite sides thereof inclined shoulders 28. The casting 29 is in the present instance provided with the usual fork 30 at its lower end, through which passes the connecting-rod 31, which is employed to connect it with a companion casting and which serves as a journal for the caster-wheel 32. The casting is provided at its opposite sides with a pair of vertical flanges 33, whose upper ends are inclined as at 34 and which correspond with and receive as well as correspond to the inclined shoulders 28 of the foot. The opposite flanges 33 are provided with inclined slots 36 and through the same pass the ends of the guide-pin 37, which also passes

through and is fixed within the tenon 27 of the foot.

In Figs. 8 and 9 I have illustrated a third modification. In this case the foot 38 remains unslotted and is of the usual width, but is provided with a transverse guide-pin 39 and has its lower end provided with a beveled or inclined portion 40. The foot is embraced by the opposite vertical flanges 41 which are formed upon the casting, the said flanges having inclined slots 42 for the reception of the ends of the pins. The space between the flanges is inclined, as at 43, to conform to and receive the inclined end of the foot. Below this the casting is given the usual fork 44 for the reception of the connecting rod 45 and the caster-wheel 46.

From the foregoing description, in connection with the accompanying drawings, it will be seen that I have provided a very simply constructed attachment for use upon any legged article, wherein it is desirable that the same should remain stationary regardless of its position upon the floor; and, furthermore, that various devices may be constructed in a similar manner or upon a similar basis without departing from the spirit of my invention or sacrificing the advantages thereof, so that I would therefore have it understood that I do not limit the invention to the details of construction herein shown and described.

Having described my invention, what I claim is—

1. The combination with the leg of an article terminating in opposite feet, said feet having inclined faces, of castings for said feet, having similarly disposed inclined faces, and means for securing them movably upon the feet, substantially as specified.

2. The combination with the leg of an article having opposite feet provided with oppositely-disposed inclined faces, of castings provided with wheels secured to the feet and having opposing faces, connecting rods between the castings and means for securing the castings loosely upon the feet, substantially as specified.

3. The combination with the leg of an article having opposite feet provided with oppositely inclined bearing faces, of opposite castings having upward similarly disposed faces bearing against those of the feet bifurcated at their lower ends, a transverse connecting-rod passing through the bifurcations, rollers mounted on the rod between the bifurcations, and means for loosely securing the feet and castings together, substantially as specified.

4. The combination with the leg of an article terminating in opposite feet having oppositely disposed inclined ends provided with bifurcations, of castings having opposing faces or shoulders, and an intermediate web having an inclined slot and pins passing through the bifurcations and slot, and connecting rods between the castings substantially as specified.

5. The combination with the leg of an article terminating in opposite feet whose ends are provided with oppositely disposed inclined faces and bifurcated, of opposite castings having opposite inclined shoulders opposing those of the feet and between the same provided with vertical webs having inclined slots fitting between the bifurcations of the feet, guide-pins passing loosely through the slots and secured to the bifurcations of the feet, forks at the lower ends of the castings,

a transverse connecting-rod passing through the forks and connecting the castings, and easter-wheels mounted on the rod within the forks, substantially as specified.

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

WILLIAM JACKSON HUMPHREYS.

Witnesses:

J. H. SIGGERS,
W. S. DUVALL.