June 11, 1935. L. FITHIAN 2,004,238

LEVELING AND ADJUSTING BLOCK

Filed Jan. 25, 1934

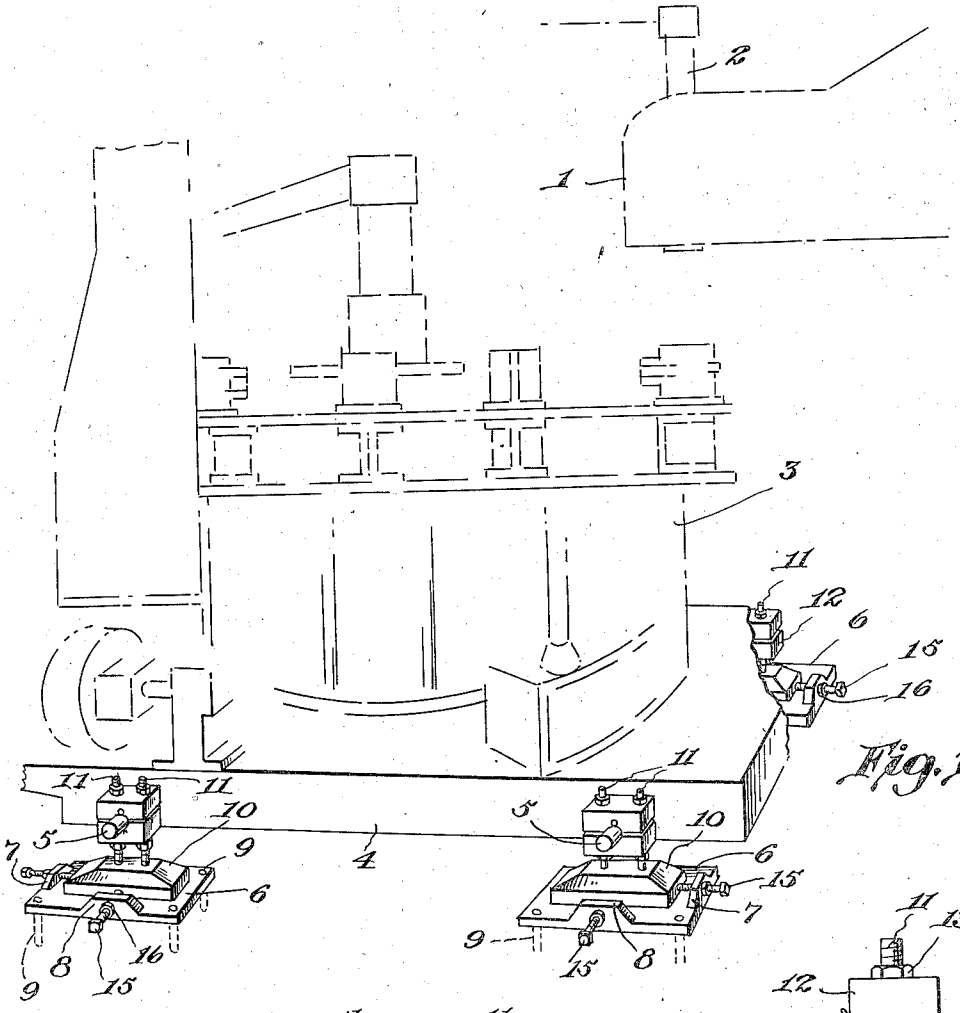

Fig. 1.

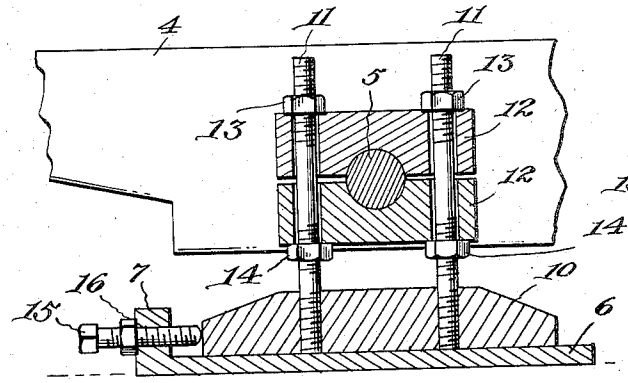

Fig. 2.

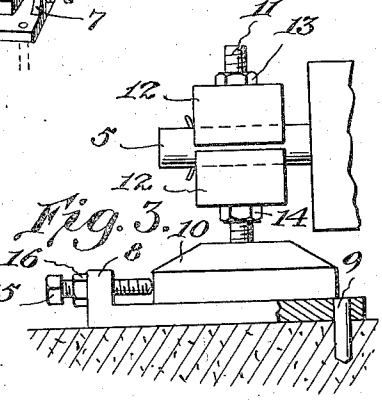

Fig. 3.

Inventor

Lon Fithian

By

Eccleston & Eccleston

Attorneys

Patented June 11, 1935

2,004,238

UNITED STATES PATENT OFFICE

2,004,238

LEVELING AND ADJUSTING BLOCK

Lon Fithian, Washington, Pa., assignor to Hazel-Atlas Glass Company, Wheeling, W. Va., a corporation of West Virginia

Application January 25, 1934, Serial No. 708,303

3 Claims. (Cl. 248—23)

The invention relates generally to supports for machinery, and especially to supports for fabricating machines for glassware. The invention will be particularly described in connection with glass fabricating machines, but it will be understood that the invention is equally well adaptable to many other machines.

It is a common practice to mount glass fabricating machines on wheels, so that they can be readily moved into approximate position with relation to the feeder of a particular flow spout of a glass tank. But for well known reasons the machine must be very accurately adjusted horizontally and vertically with respect to the feeder and with respect to other parts; and of course the machine must be accurately leveled. Further, after the machine has been accurately adjusted it must be securely held in such position against displacement.

One of the objects of the present invention is to provide a simple device by which glass forming machines and other machines can be universally adjusted laterally, be adjusted vertically, and be leveled.

Another object of the invention is to provide such a device which will prevent any gradual or other accidental displacement of the machine from its accurately adjusted position.

A further object of the invention is to provide a device of this character which may be easily attached to the axles of the machine in lieu of the wheels.

Numerous objects and advantages of the invention will be apparent to those skilled in the art from the following description when taken in connection with the accompanying drawing; in which,

Figure 1 shows in dotted outline a conventional forming machine, and in full lines the supports upon which the machine is mounted.

Figure 2 is a vertical sectional view through one of the supports, and

Figure 3 is an elevational view, partly in section, taken at right angles to Figure 2.

Referring to the drawing in detail, the numeral 1 indicates a conventional flow spout provided with a feeder plunger 2, while the numeral 3 indicates a conventional forming machine provided with a base 4 on which the molds and operating mechanism are supported. Numeral 5 refers to the axles which are provided with wheels (not shown) for moving the machine from place to place.

The leveling and adjusting blocks for the machine, which will now be described, are four in number, one for each end of each axle, and are substantially identical. Therefore, a description of one will suffice for all. Numeral 6 indicates a base plate of suitable dimensions provided with two upstanding lugs 7 and 8. These plates are located below the machine at the four corners thereof and are firmly secured in position by any desired means, as by driving dowel pins 9 through holes in the plate into the floor.

Supported on each base plate 6 is a sub-base plate 10 provided with a pair of upwardly extending adjusting rods or bolts 11 which may be rigidly secured in the member 10 in any desired manner. Loosely mounted on each pair of rods 11 is a pair of clamping members 12, 12, adapted to surround and grip one of the ends 5 of the axles. Nuts 13 and 14 are threaded onto the rods 11 above and below the clamping members 12 and serve not only to cause these members to tightly grip the axles but may also be adjusted up or down to vertically adjust the axle.

The horizontal position of the clamps 12 and likewise the axles 5 and machine 3 may be adjusted by means of adjusting bolts 15 which are threaded into the lugs 7 and 8 and engage two sides of each sub-base plate 10. Locking nuts 16 serve to secure the bolts 15 in adjusted position.

In installing a particular machine at the flow spout the machine is first rolled to approximate position and jacked up and the wheels removed. One of the units, comprising the sub-base plate 10, rods 11, and clamp members 12, is then positioned on each end of the two axles and clamped into position by the nuts 13, 14. The base plates 6 are now positioned on the floor underneath the machine, and the machine is then lowered, the sub-base plates 10 coming to rest on the base plates 6. The base plates are now fixedly secured in position by driving dowel pins 9 into the floor through holes in the base plate.

The machine may now be given any desired adjustment. By manipulating the bolts 15 the machine may be turned, moved backward or forward, to either side, or in any other direction; this simple mechanism constituting in fact a universal lateral adjustment. By adjusting the nuts 13, 14, any one of the four corners may be raised or lowered to accurately level the machine; and by adjusting all of these nuts to the same extent the machine may be raised or lowered while maintaining its level.

The foregoing description refers to a machine mounted upon rollers or wheels, but it will be

understood of course that the invention is in no manner limited to such a machine, for obviously the levelling and adjusting blocks can be associated with any appropriate part of the machine.

By means of the simple and inexpensive device described herein, a glass forming machine and other machines may be accurately leveled, may be accurately adjusted vertically, and may be accurately adjusted laterally universally. And while the preferred structure has been described in detail it will be understood that the specific structure shown and described may be changed and modified in various respects, and all such changes and modifications are intended to be included within the scope of the appended claims.

What I claim is:

1. Adjusting blocks for machines, including base plates mounted on the floor below the machine, sub-base plates slidably mounted on the base plates, threaded rods carried by and projecting upwardly from the sub-base plates, clamping members loosely mounted on the threaded rods, nuts threaded on the rods, said nuts adapted to clamp the members about an axle or the like on the machine and to vertically adjust the members, and means for laterally adjusting the sub-base plates.

2. Adjusting blocks for machines, including four base plates mounted on the floor below the machine, one of said base plates being located adjacent each of the four corners of the machine base, a sub-base plate slidably mounted on each of the four base plates and supporting the machine, means for adjusting each of the sub-base plates in two directions in a horizontal plane, whereby the machine can be universally adjusted in a horizontal plane, clamping members carried by the sub-base plates and adapted to be clamped about axles or the like on the machine, and means for vertically adjusting the clamping members.

3. Adjusting blocks for machines, including four base plates mounted on the floor below the machine, one of said base plates being located adjacent each of the four corners of the machine base, a sub-base plate slidably mounted on each of the four base plates and supporting the machine, lugs projecting upwardly from the two outer sides of each base plate, bolts threaded through said lugs and having their inner ends abutting against the two outer sides of the sub-base plates, whereby the machine can be universally adjusted in a horizontal plane, clamping members carried by the sub-base plates and adapted to be clamped about axles or the like on the machine, and means for vertically adjusting the clamping members.

LON FITHIAN.