E. V. WURTS.

HORSE FOR GLASS CYLINDERS.

APPLICATION FILED APR. 23, 1906.

916,518.

Patented Mar. 30, 1909.

2 SHEETS—SHEET 1.

Fig. 2.

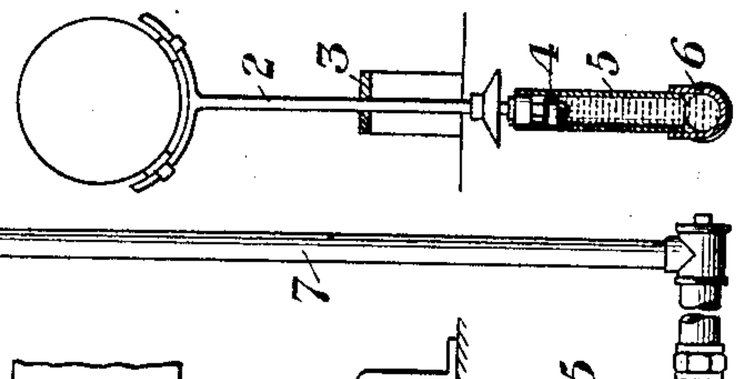
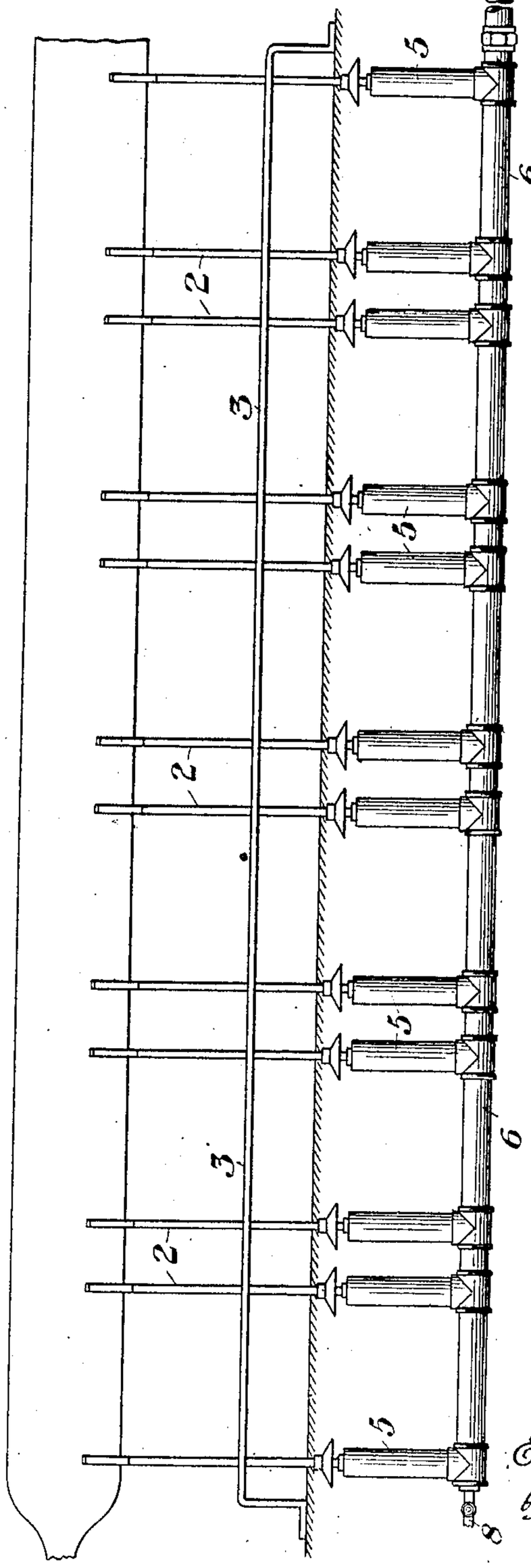


Fig. 1.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 3.

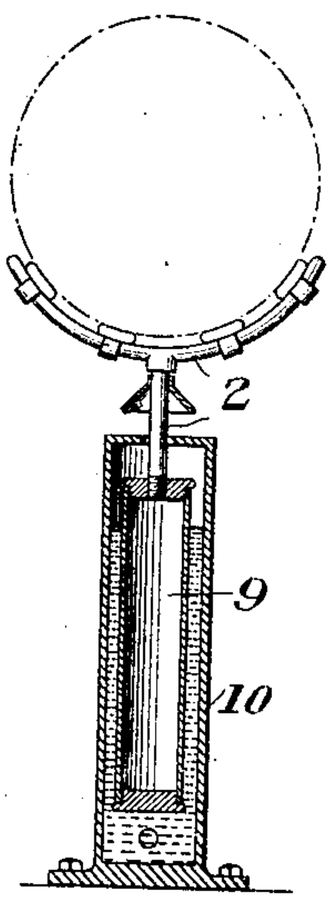


Fig. 4.

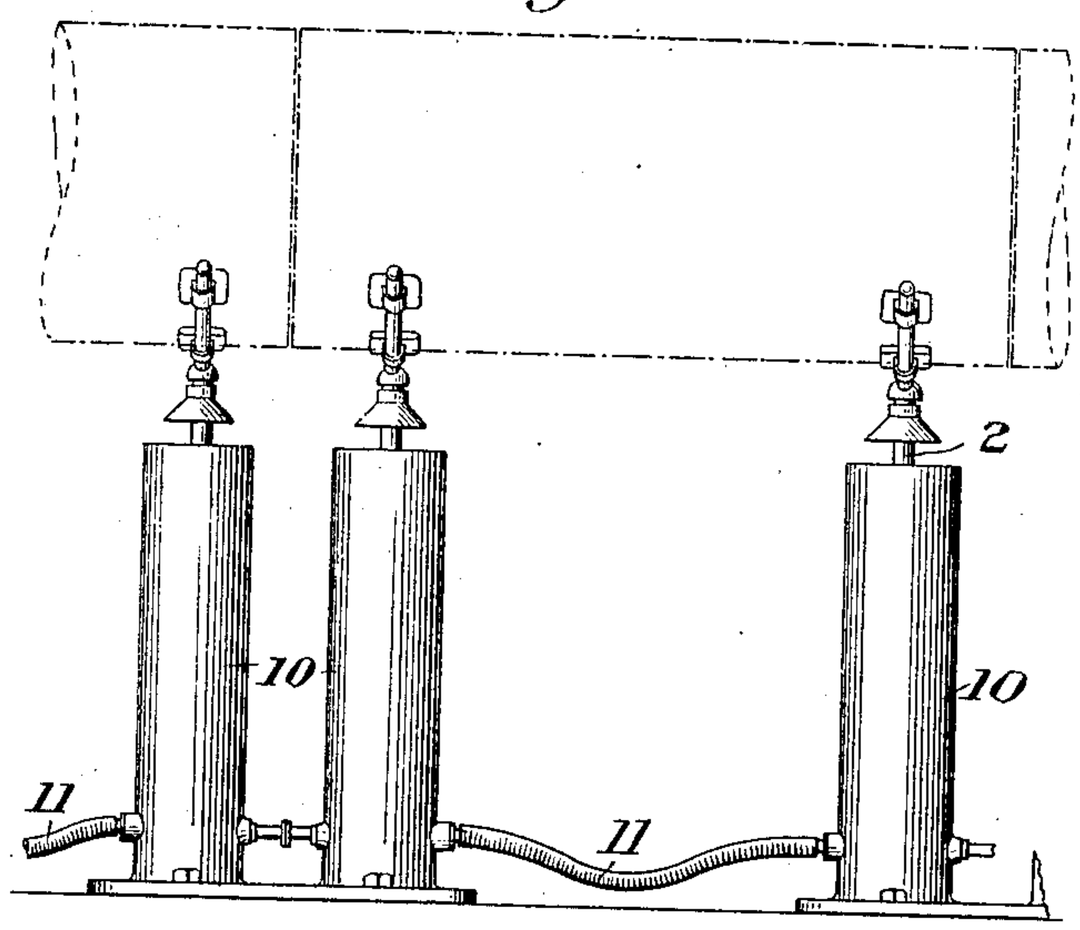
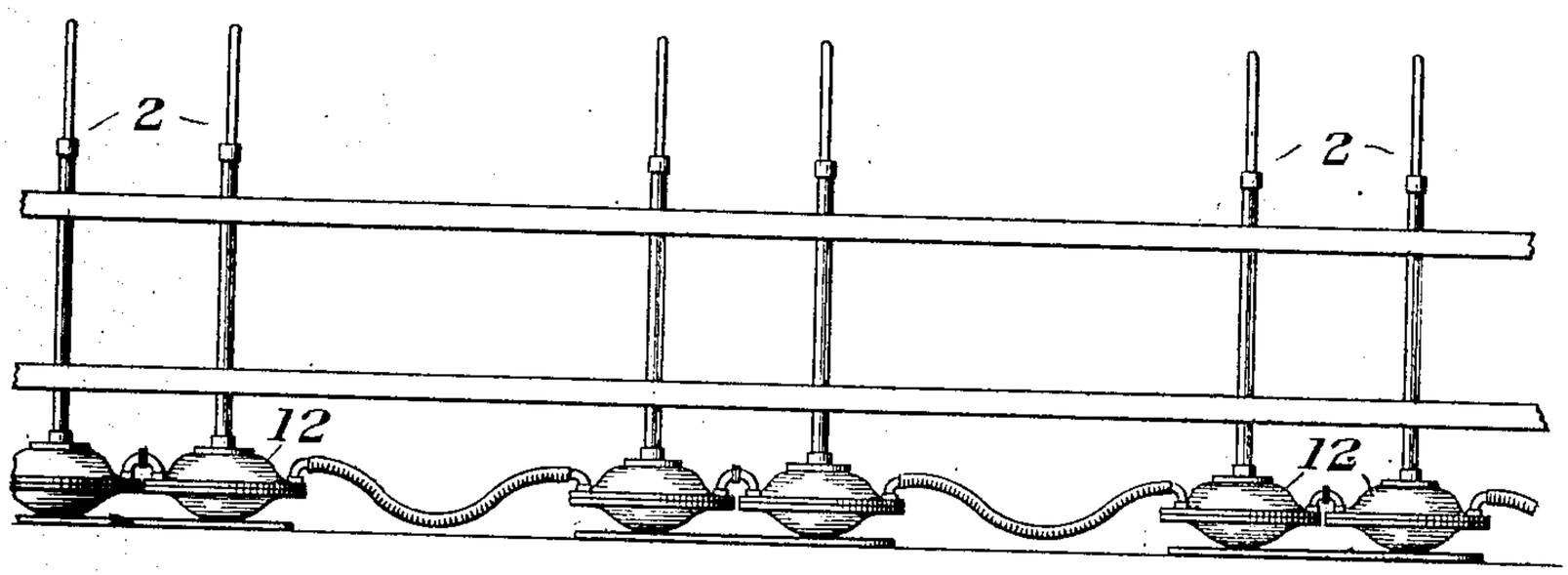


Fig. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

EDWARD V. WURTS, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO WINDOW GLASS MACHINE COMPANY, OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF NEW JERSEY.

HORSE FOR GLASS CYLINDERS.

No. 916,518. Specification of Letters Patent. Patented March 30, 1909.

Application filed April 23, 1906. Serial No. 313,195.

To all whom it may concern:

Be it known that I, EDWARD V. WURTS, of Pittsburg, Allegheny county, Pennsylvania, have invented a certain new and useful Horse for Glass Cylinders, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation showing one form of my improved horse; Fig. 2 is a cross-section of the same; Fig. 3 is a cross-section showing a modified form; Fig. 4 is a side elevation of the form shown in Fig. 3; and Fig. 5 is another modified form.

My invention relates to the supporting of glass cylinders during the capping or cracking of the cylinder into lengths or sections.

The primary object of the invention is to provide a uniform support for the different parts of a glass cylinder which will compensate for different weights and diameters in the different parts of the cylinder, whereby the cylinder will not only be uniformly supported but movement of the adjacent ends of the severed sections will be obviated, which movement would tend to break and crack the ends of the severed sections.

Other objects are to readily adjust the support automatically to fit variations in the form of the cylinder and to provide for separate supports for the separate sections of the cylinder after it is cut.

In the drawing, referring to the form of Figs. 1 and 2, I show a hydraulic equalizing system; thus, the supporting rods 2 extend through intermediate guides 3, and are secured at their lower ends to pistons 4 moving within vertical pipes or cylinders 5. These cylinders 5 are preferably connected to a common main pipe 6, in which fluid is maintained at a certain pressure under a given height of liquid adjusted by the height of liquid in a stand-pipe 7 connected to one end of the closed end main pipe 6; or the system may be balanced by air pressure over the water in a closed reservoir. 8 indicates a small supply pipe, through which fluid may be forced into the system. The supports are preferably arranged in pairs, as shown with alternate wide and narrow gaps, the cylinder being preferably severed in the short-gap portions. When the cylinder is set upon the forked arms of supports 2, which may be covered with asbestos or any suitable material, the pistons will be depressed forcing the water upwardly within the stand-pipe. The amount of this downward movement will depend upon the weight and size of the cylinder portions and height of water head in 7. The glass will come to rest with a uniform support in all its portions, the pressure automatically equalizing throughout the system. The glass may be cracked off in the ordinary manner, the several lengths being supported independently of each other by the series of supports.

In Figs. 3 and 4 I show a form similar to Figs. 1 and 2, except that instead of a piston a hollow metal float 9 is used, which is carried within the liquid chamber 10, these liquid chambers being connected by tubes 11 which may be flexible to allow the adjustment of the chambers toward or from each other. In this case the float will move within the liquid under the pressure of the cylinder and the action will be substantially the same as before.

In the form of Fig. 5 each support 2 rests upon a diaphragm in chamber 12, the diaphragm chambers being connected with each other by flexible pipes and containing air or gas.

The advantages of my invention result from the equalizing and uniform support of the cylinder through its different parts whatever their elevation, and automatic adjustment of position. This uniform support and adjustment will be afforded independently of varying weight or varying diameter. The apparatus in the form shown provides for the use of a liquid, but it will be understood that any other fluid such as a gas may be used. The supports may be independent of each other, the yielding pressure may be obtained in other ways, and many other changes may be made in the form and arrangement of parts without departing from my invention, since I consider myself the first to provide a horse with yielding supports for the glass which are interconnected and give a substantially uniform support throughout and also the first to use the fluid connections, whether liquid or gaseous.

I claim:—

1. A horse for glass cylinders, comprising a series of yieldingly mounted supports, and means for applying equalizing pressure to

said supports, the supports being so spaced as to provide separate support for each section, when the cylinder is cut into sections.

2. A horse for supporting glass cylinders for cutting, comprising a series of automatically adjustable yielding supports, means to hold them in vertical position independent of the article supported, and said supports being so spaced as to independently hold each section when the cylinder is cut in sections.

3. A horse for glass cylinders comprising a series of hydraulic cylinders mounted in pairs to independently support each section when the cylinder is cut in sections.

4. A horse for glass cylinders comprising a series of hydraulic cylinders, having their plungers provided with supporting forks, intercommunicating pipes to equalize the pressure in the cylinders, means to support the forks independently of the glass cylinder, and said cylinders being so spaced as to independently support each section when the cylinder is cut in sections.

In testimony whereof, I have hereunto set my hand.

EDW. V. WURTS.

Witnesses:
JOHN MILLER,
H. M. CORWIN.