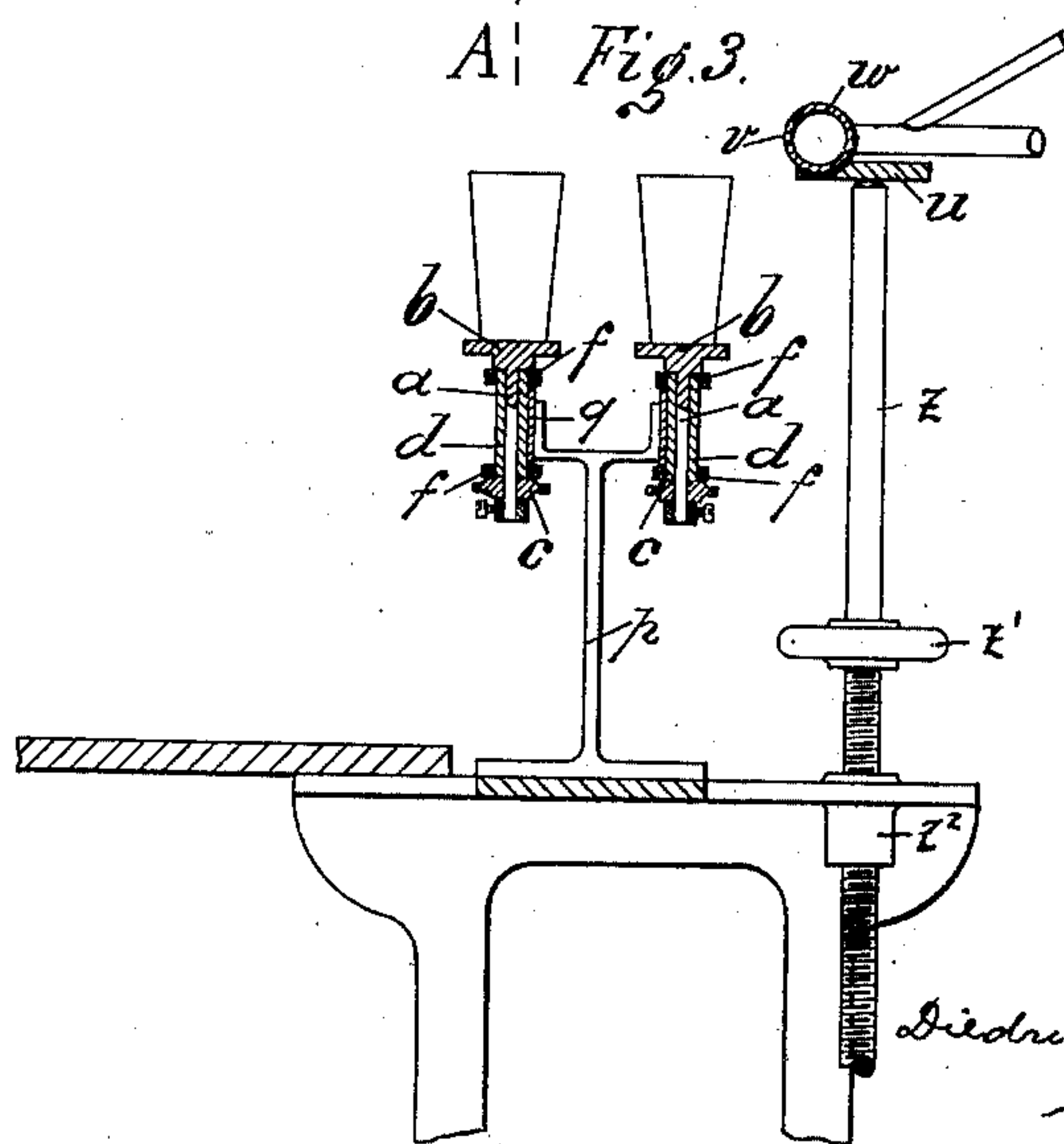
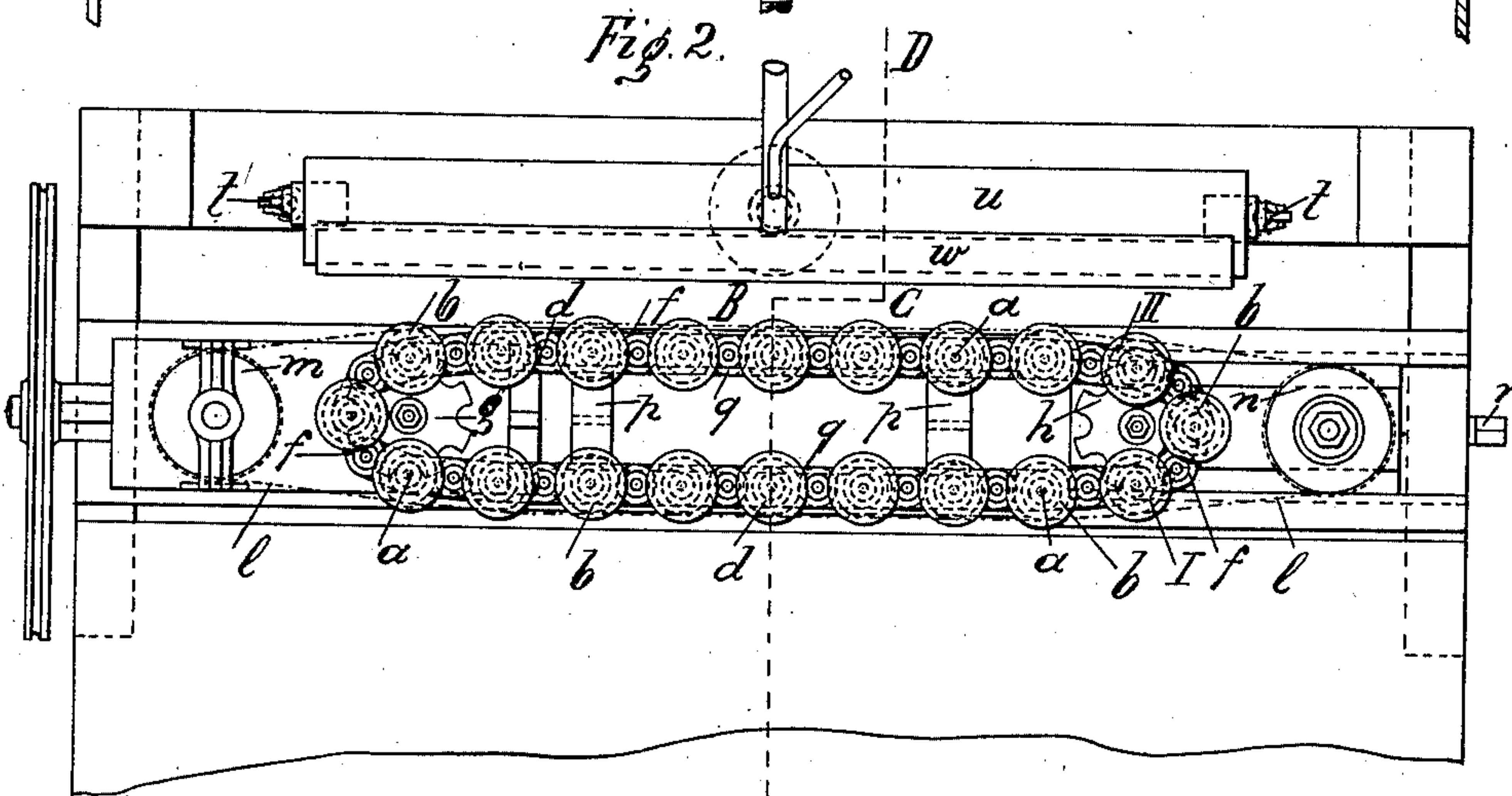
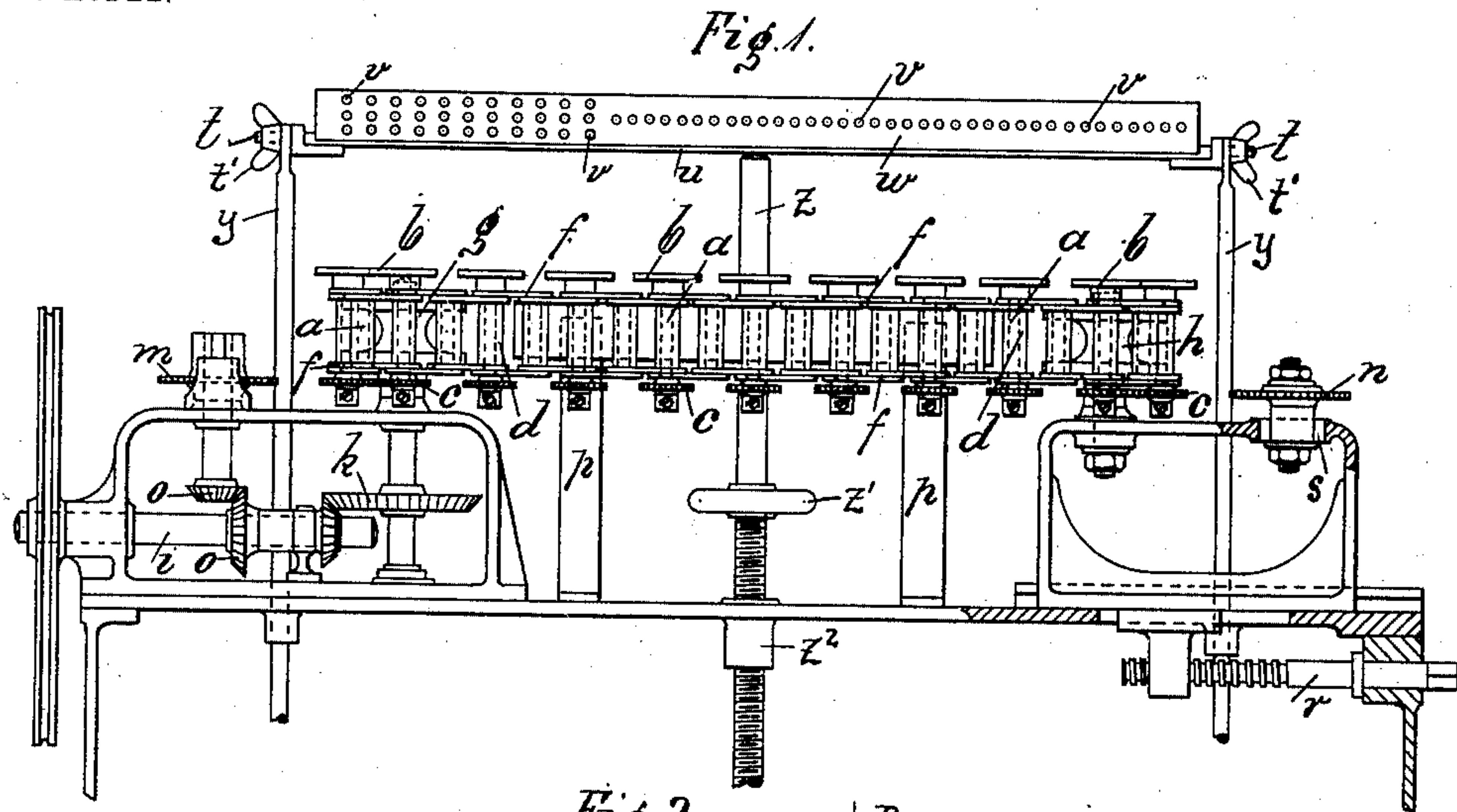


No. 737,400.

PATENTED AUG. 25, 1903.

D. W. GUNDLACH.  
APPARATUS FOR FIRE POLISHING.  
APPLICATION FILED JUNE 18, 1901.

NO MODEL.



Witnesses:  
Edward Ray.  
William Schulz.

Inventor:  
Diedrich Wilhelm Gundlach  
by his attorneys  
Roester & Briesen



# UNITED STATES PATENT OFFICE.

DIEDRICH WILHELM GUNDLACH, OF ALTONA, GERMANY.

## APPARATUS FOR FIRE-POLISHING.

SPECIFICATION forming part of Letters Patent No. 737,400, dated August 25, 1903.

Application filed June 18, 1901. Serial No. 65,016. (No model.)

*To all whom it may concern:*

Be it known that I, DIEDRICH WILHELM GUNDLACH, a subject of the King of Prussia, residing at Altona, Germany, have invented  
5 certain new and useful Improvements in Apparatus for Fire-Polishing, of which the following is a specification.

This invention relates to an apparatus for fire-polishing the edges of glasses with a free-  
10 melting flame, the essential novelty of which is a movable table that will allow of its working without interruption and is arranged in such a way that the heat coming off the flame, which properly serves for melting up the  
15 edges of the glasses, is at the same time availed of for the preparatory heating of the glasses, whereby the disadvantage connected with the melting-machines heretofore used of consuming a large quantity of gas over and above  
20 what is reasonably required by the melting process is entirely done away with, and thus a machine is provided which will work exceedingly well in every respect.

In the accompanying drawings the machine  
25 is represented by Figure 1 in front view, by Fig. 2 in plan, and by Fig. 3 in section on line A B C D of Fig. 2.

It chiefly consists of a number of spindles *a*, that bear at their upper ends one plate *b* each,  
30 that serves as a base for the glass to be melted up, and at their lower end a small cog-wheel *c*. These spindles are inserted in the hollow bolts or sockets *d* of a link chain *f*, that runs in an upright position and in a horizontal  
35 plane upon chain-pulleys *g* and *h*, the former of which is made to turn by a shaft *i* by the conical wheels *k*. A link chain *l* (which has been omitted in Figs. 1 and 3 for the sake of  
40 distinctness) engages into the cog-wheels *c* of the spindles *a*. It is led over chain-wheels *m* and *n* and moved through the wheel *m* from shaft *i*, by means of the conical wheels *o*, in a direction contrary to the course of the chain  
45 *f*. To prevent the chain *f* from sagging, there are provided between the chain-pulleys *g* and *h* two supports *p*, on which plates *q* are fixed, on the upper edge of which the plates of the chain glide while at the outside the chain-bolts roll. To make it possible to strain the  
50 chains *f* and *l*, on one hand, the right bearing may be adjusted by a screw *r*, and, on the

other hand, the chain-wheel *n* may be disposed in a slot in the bearing. A table *u* carries the burner, which is placed opposite to one of the runs of chain *f*. This burner consists of a pipe *w*, having perforations *v*, that  
55 are arranged side by side or above one another, so as to emit a number of small open flame-jets. The table *u* is adjustably connected by pins *t* and winged nuts *t'* to rods *y*,  
60 adapted to slide vertically in perforations of the frame. It is supported by a vertically-movable worm-shaft *z*, having a hand-wheel *z'* and engaging a threaded hub *z''* of the frame, so that the burner may be raised or  
65 lowered by turning the hand-wheel.

The operation of the machine is as follows: After the chains *f* and *l* have been set into motion by driving the shaft *i* and the flame  
70 has been ignited the glasses to be melted up are set on the plates *b* at the place marked with I in Fig. 2. They are then heated gradually in a preparatory way as they run through the outer part of the way of the chain and then melted up while moving over the inner  
75 part of the way, so that they can be taken off as ready when at I of Fig. 2.

The advantage this machine has over the melting-up machines known with movable working-table is, as mentioned already, that  
80 the glasses on account of the small width of the way wherein they are made to pass by the burner are heated and melted up by one and the same flame, which will effect, on one hand, a great saving of gas and, on the other  
85 hand, a considerable increase of the velocity at which the glasses are made to pass by the burner, thus giving to the machine a capacity of production not as yet obtained by any other machine of the kind.  
90

I claim—

1. In a machine for fire-polishing glasses, the combination of an endless chain with means for driving said chain, spindles carried by the chain, chain-wheels mounted upon  
95 the spindles, a second endless chain engaging the chain-wheels, and means for driving said second chain in a direction opposite to that of the first chain, substantially as specified.

2. In a machine for fire-polishing glasses, 100 the combination of a burner, with an endless chain having sockets, means for driving said

chain, plates having spindles that are engaged by the chain-sockets, chain-wheels mounted upon the spindles, a second endless chain engaging the chain-wheels, and means  
5 for driving said second chain in a direction opposite to that of the first chain, substantially as specified.

Signed at Hamburg, Germany, this 4th day of June, A. D. 1901.

DIEDRICH WILHELM GUNDLACH.

Witnesses:

MAX FOUGUET,  
FRANZ STEFFENS.