

(No Model.)

2 Sheets—Sheet 1.

B. WEAVER.  
GUIDE BOX.

No. 315,362.

Patented Apr. 7, 1885.

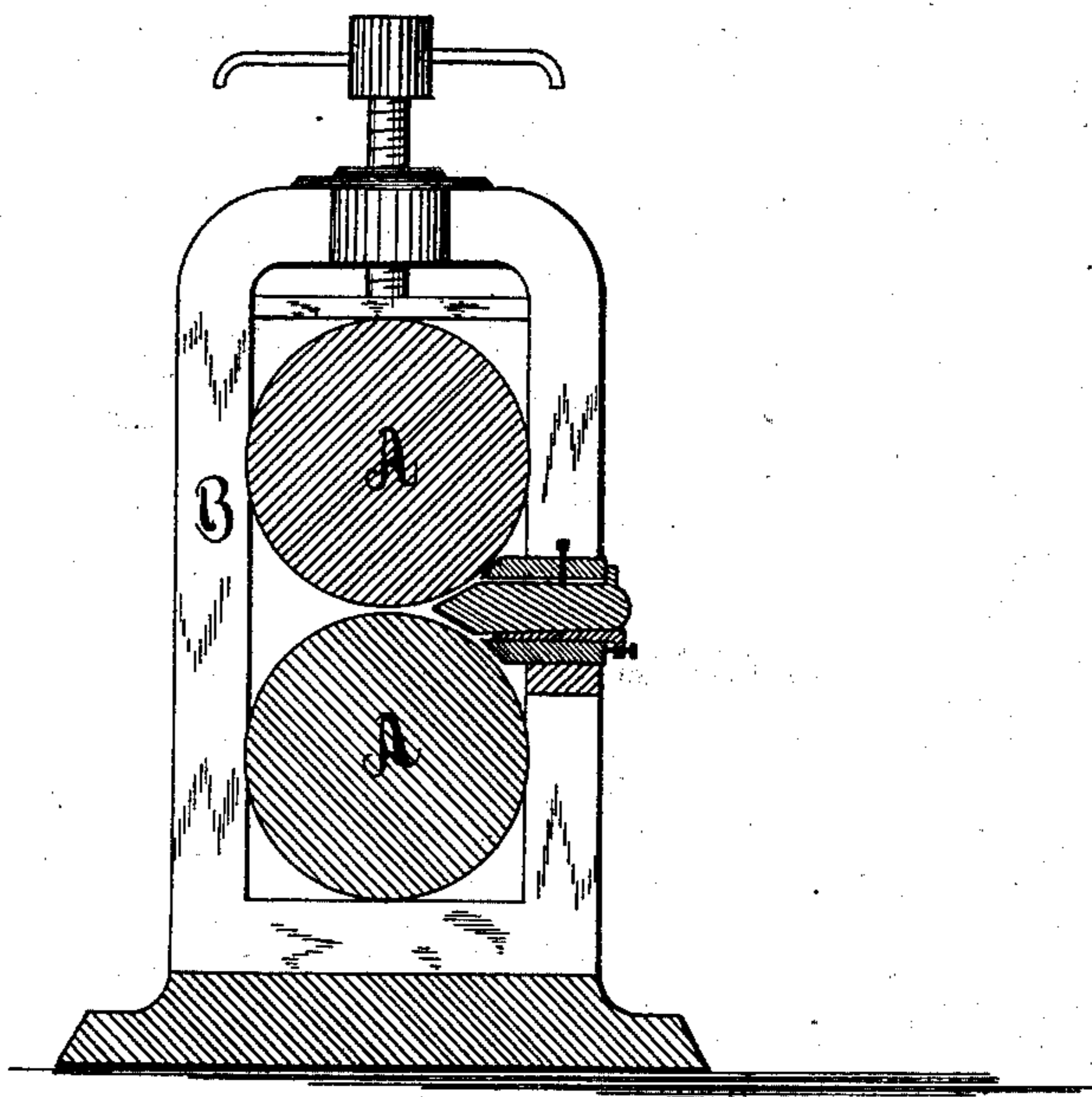


Fig. 1.

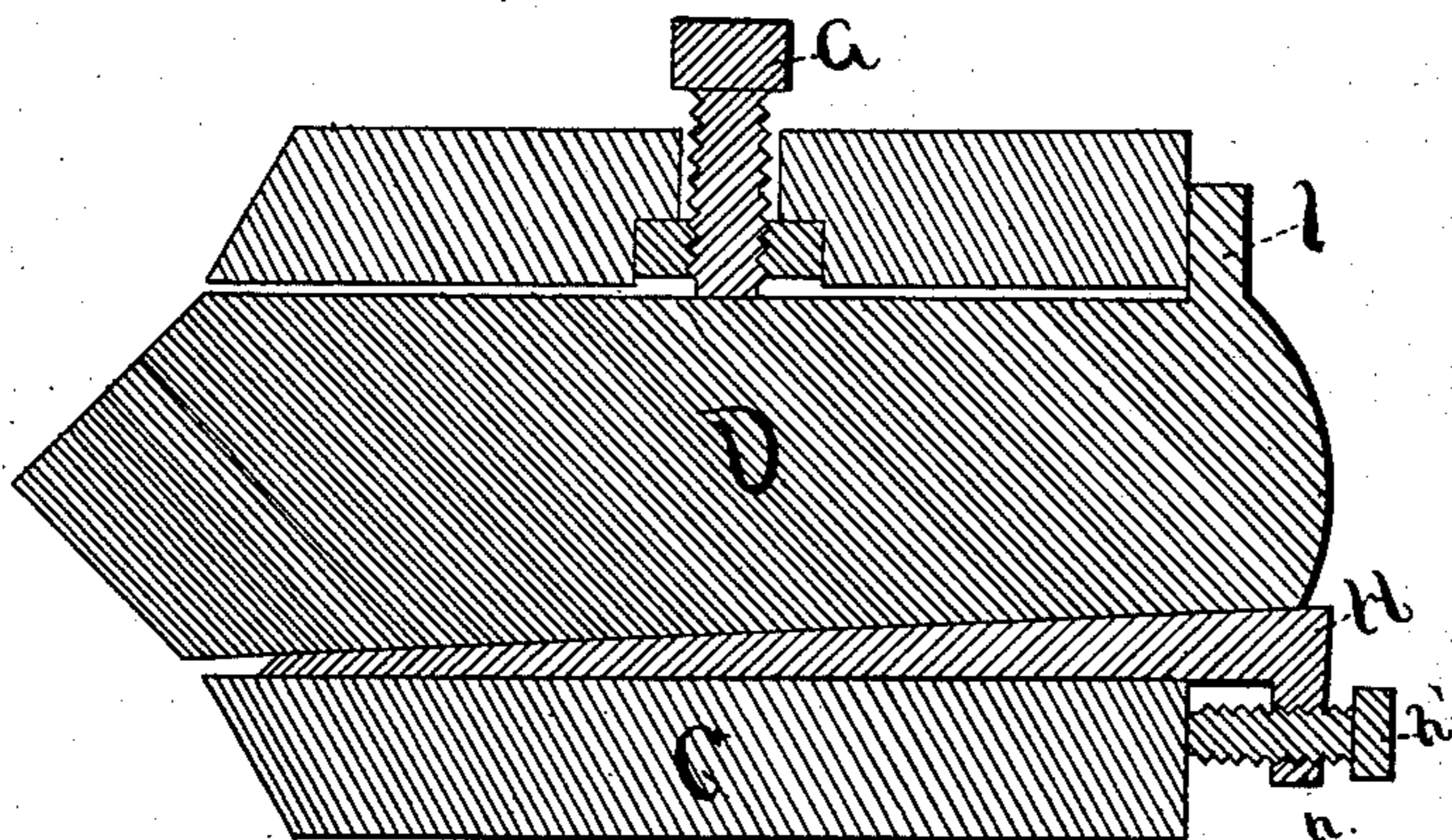


Fig. 3.

WITNESSES:

*Alva A. Moore*  
*Willis B. Magruder.*

*BENJAMIN WEAVER*  
INVENTOR

*Prof. Connolly Bros & Co*  
ATTORNEYS

(No Model.)

2 Sheets—Sheet 2.

B. WEAVER.

GUIDE BOX.

No. 315,362.

Patented Apr. 7, 1885.

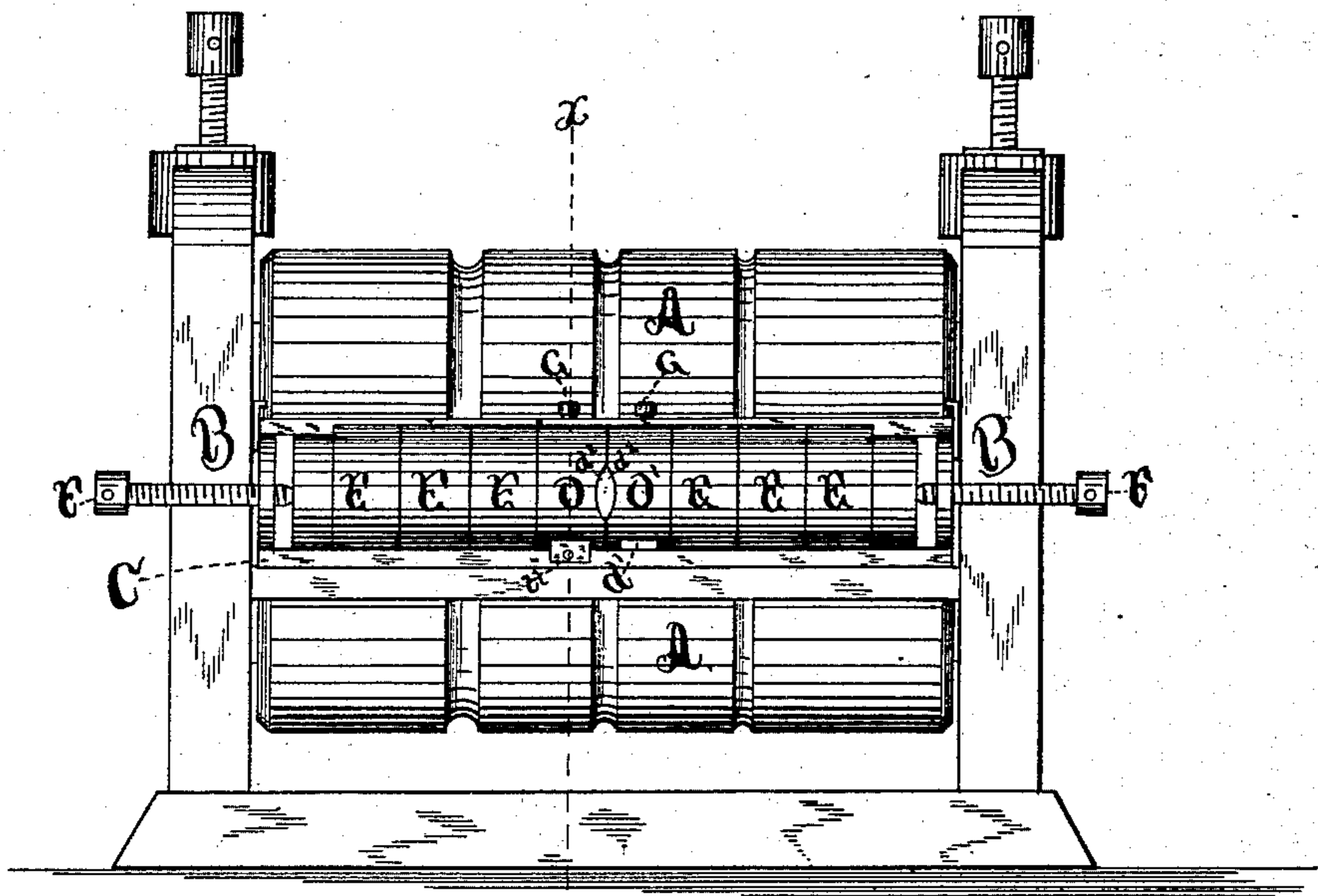


Fig. 2.

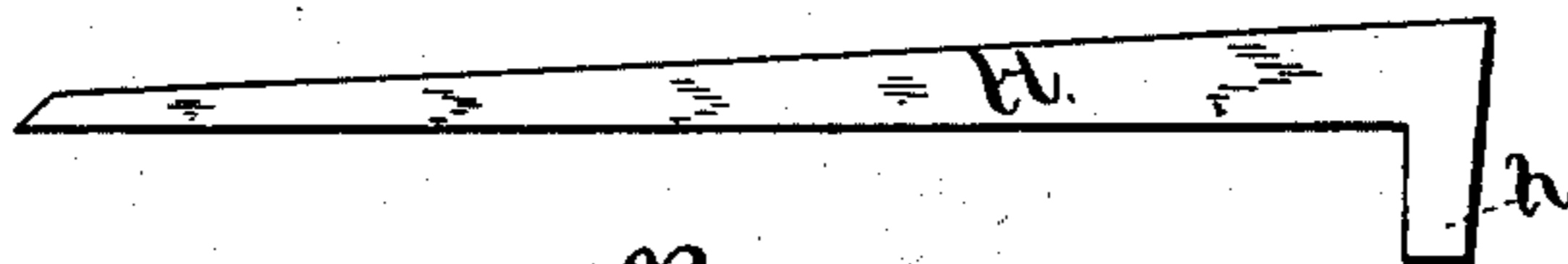


Fig. 4.

*WITNESSES:*

Alva A. Moore.  
Willis B. Magruder.

BENJAMIN WEAVER

INVENTOR

By  
Counsellor Bros. & Co. Type

**ATTORNEYS**

# UNITED STATES PATENT OFFICE.

BENJAMIN WEAVER, OF PITTSBURG, PENNSYLVANIA.

## GUIDE-BOX.

SPECIFICATION forming part of Letters Patent No. 315,362, dated April 7, 1885.

Application filed November 19, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN WEAVER, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain  
5 new and useful Improvements in Guide-Boxes; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use  
10 the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention has relation to "guides" for rolling-mills, and has for its object to provide  
15 a guide which will be of such construction that any inequalities of the grooves in the guide may be speedily and perfectly adjusted; or, in other words, when it is desirable to adjust the guides, it can be done in a perfectly  
20 exact manner, with but little loss of time and labor.

In the guides for rolling-mills as now generally constructed, when one side of the working groove in the guide becomes worn or uneven,  
25 and it is desirable or necessary to adjust the same, the usual method is to remove the side that is worn and raise it to the level of the other side by placing under it thin plates or sheets of iron. This method consumes considerable  
30 time and labor, and then is far from being satisfactory, as it is almost impossible to perfectly adjust the guides in this way.

My invention consists of the novel construction, combination, and arrangement of parts,  
35 as hereinafter described and claimed.

Referring to the accompanying drawings, Figure 1 is a vertical section of a pair of rolls and the guide-box; Fig. 2, a front view of a pair of rolls with the guide-box in position;  
40 Fig. 3, an enlarged section of the guide-box on line  $x x$  of Fig. 2, and Fig. 4 a side view of the wedge which I employ to adjust the height of the guides.

A A designate the rolls, and B B the housings in which said rolls are supported. C designates the guide-box, which consists of a rectangular casing attached to the housings B B at each end and immediately in front of the rolls A A. The guide-box C is provided at  
50 its center, or opposite to the grooves in the

rolls A A, with two guides, D D'. Said guides consist of a rectangular body of metal adapted to fit loosely in the box C and project slightly therethrough, the inner ends being brought to an edge, so as to approach as closely as possible to the two rolls A A, as shown in Fig. 1 of the drawings. 55

E E E designate filling-pieces which are placed in the box C between the guides D D' and the end of the box, and F F are set-screws  
60 passing through the ends of the box, and serving to retain in position and adjust longitudinally the guides.

G G are similar screws passing through the top of the guide-box above the guides D D',  
65 and bearing against the latter.

Upon the bottom of each of the guides D D' is formed a groove,  $d d'$ , running the entire length of said guides, said grooves being deeper at the front and gradually tapering to the end  
70 of the guide, which is adapted to receive the tapered key or wedge H, which is shown separately in Fig. 4; and in order that the working groove in the guide may be adjusted vertically throughout its entire length the taper  
75 of the key must correspond exactly with the tapered groove in which it is inserted. Said key is provided with a downwardly-turned end,  $h$ , which is screw-threaded, and receives a set-screw,  $h'$ , which bears against the face of  
80 the lower side of the guide-box C. Said screw may, however, be dispensed with. The guides D D' are each provided on the one side with grooves  $d^2 d^2$ , through which the iron passes to the rolls. 85

The mode of operating my invention is as follows: The guides and filling-pieces being properly centered in the guide-box by means of set-screws F F, the wedge H is inserted in the groove  $d$  of one or the other of the guides  
90 D D', as the same may require by reason of the inequality of the grooves in the guides, and the screws G G turned down until the guides are firmly held. The guides are prevented from being pulled through the guide-box and against the rolls by flanges I I, which are formed upon the upper edges of their outer ends. The guide beneath which the key or wedge has been placed may be nicely  
95 adjusted by turning the screws G and  $h'$ , and 100

when, by reason of any inequalities in the working groove, it becomes desirable to adjust the guide, it may be done without removing it from the box.

5 Having described my invention, I claim—

1. In a guiding device for rolls, the combination, with the guide-box C, of grooved guides adjusted vertically in said box by means of a wedge inserted in a longitudinal groove in the  
10 bottom of the guide and a screw passing through the top of the guide-box and bearing on the guide, substantially as described.

2. In a guide for rolls, the combination of a guide-box, having set-screws G G in its top,

with the guides D D', having the grooves  $\bar{d}^2 \bar{d}^2$  15 on one side and the grooves  $\bar{d} \bar{d}'$  on their bottoms, the wedge H, fitting the groove on the bottom of said guides, and the set-screw h, for adjusting said wedge, all constructed and arranged substantially as described. 20

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

BENJAMIN WEAVER.

Witnesses:

GEO. W. BACKOFEN,  
ALVA A. MOORE.