

L. Sanford.
Rolling Metals.

N^o 77,922.

Patented May 12, 1868.

Fig. 1.

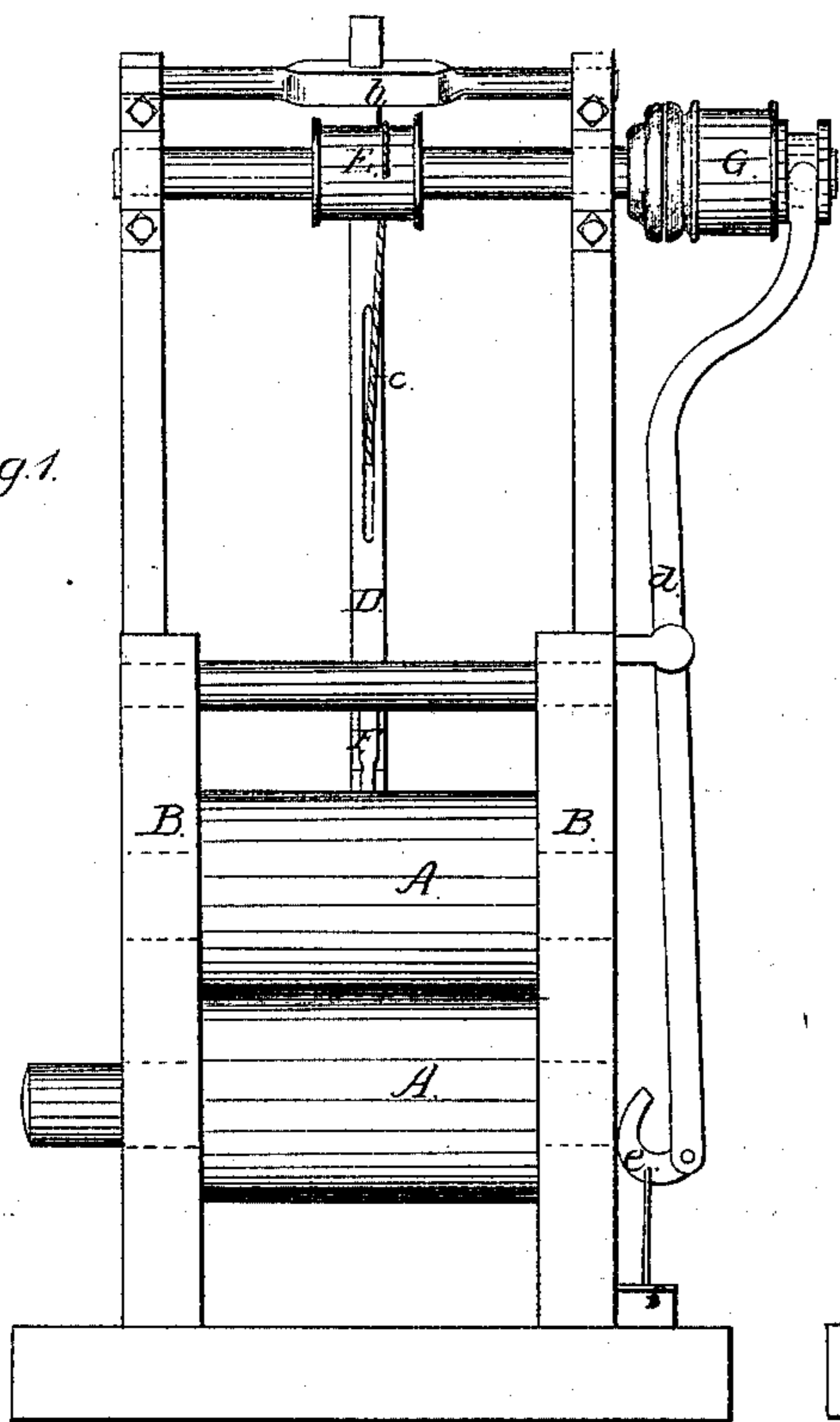


Fig. 2.

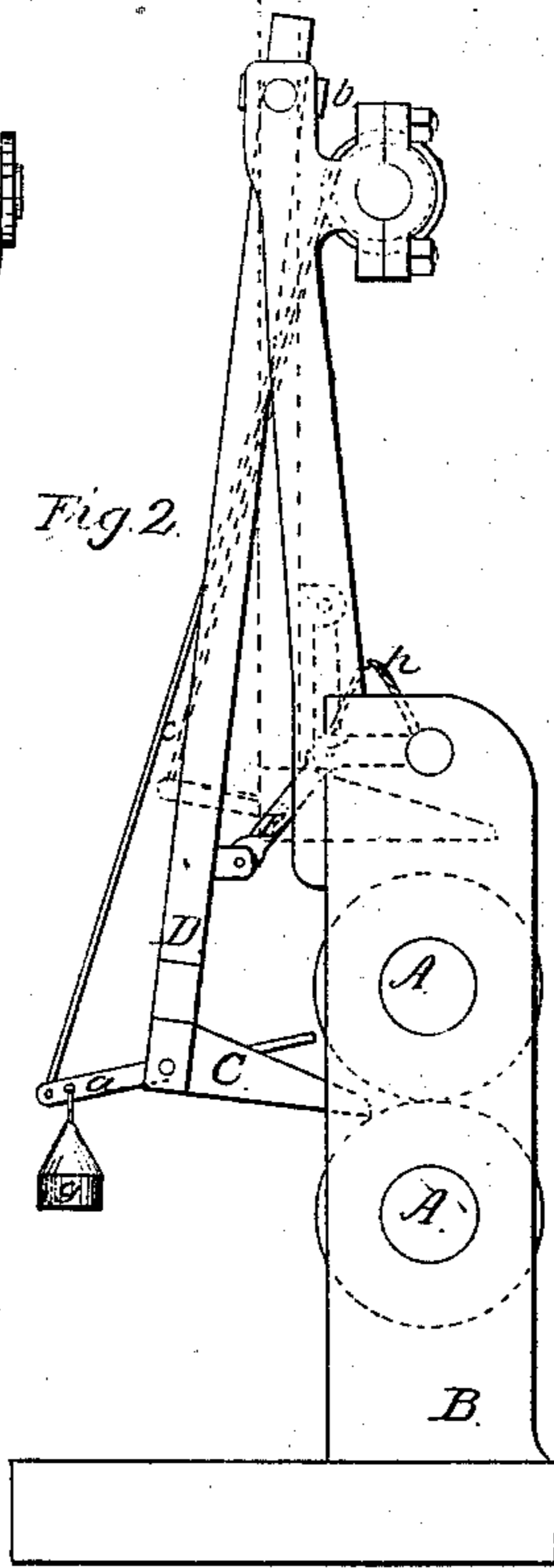


Fig. 3.

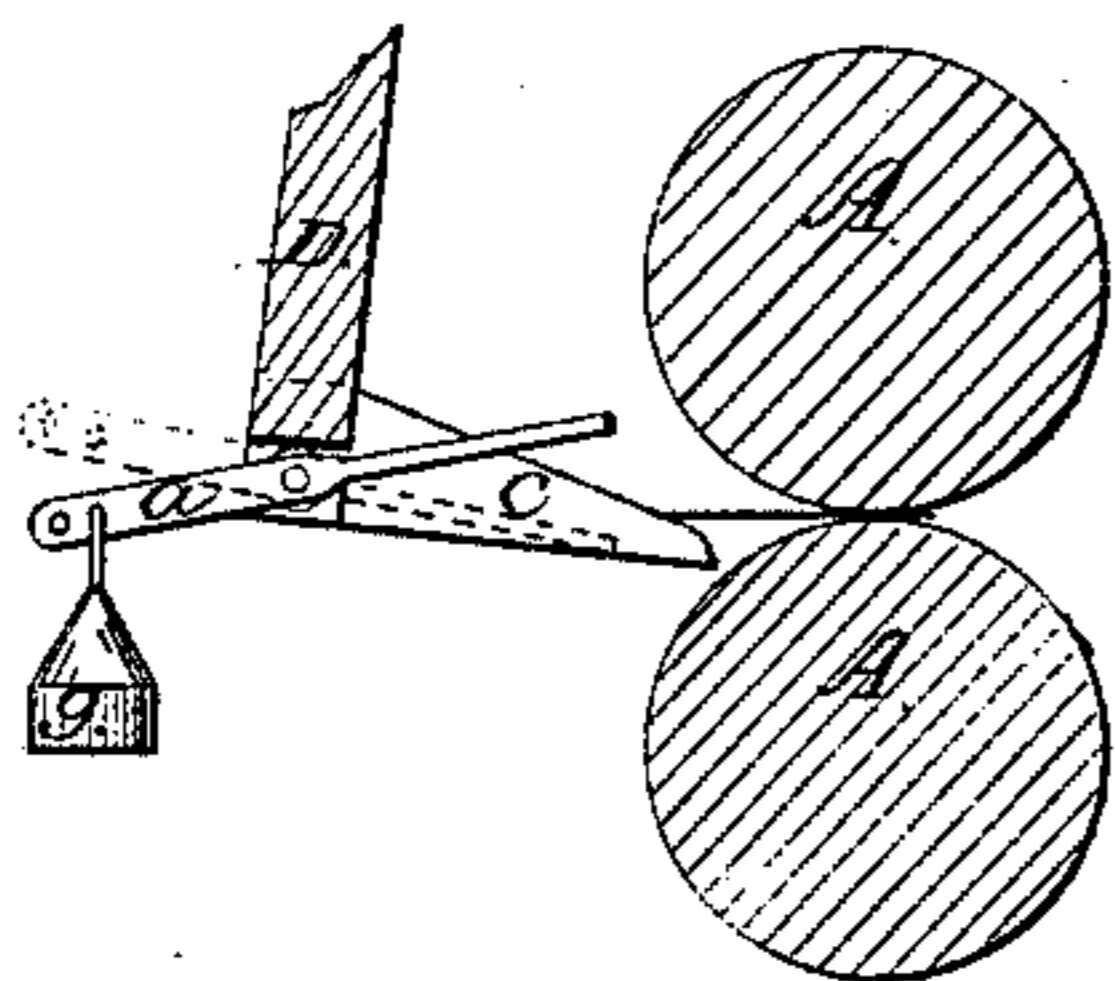
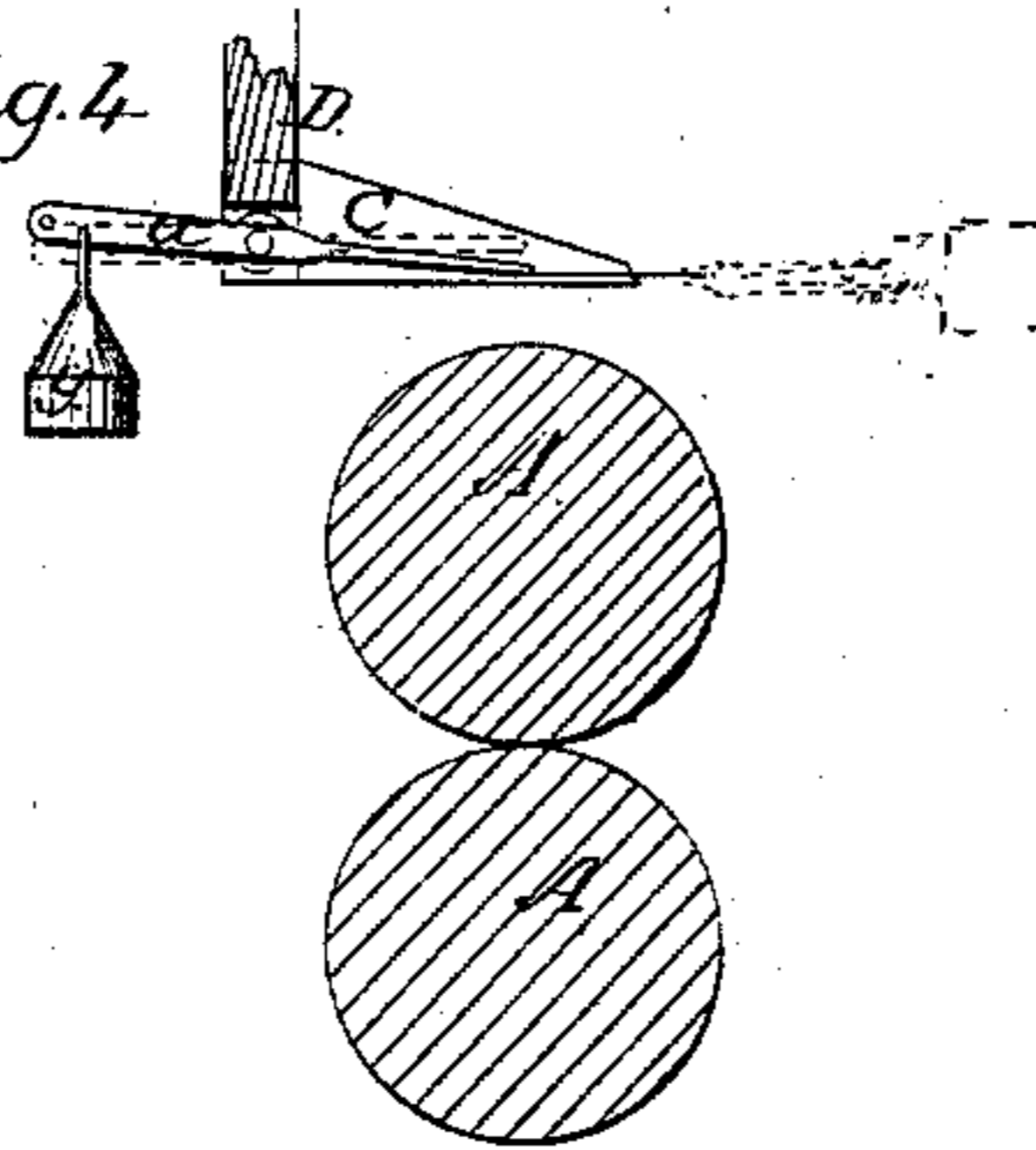


Fig. 4.



Witnesses:

Orrin N. Platt.
James R. Platt.

Inventor:

L. Sanford.

United States Patent Office.

ELIAS SANFORD, OF MERIDEN, CONNECTICUT.

Letters Patent No. 77,922, dated May 12, 1868.

IMPROVED APPARATUS FOR HANDLING IRON IN ROLLING-MILLS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, ELIAS SANFORD, of Meriden, in the county of New Haven, and State of Connecticut, have invented a new and useful Improvement on Rolling-Mills; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon. Said drawings constitute part of this specification, and represent, in—

Figure 1, a front view of my improvement,

Figure 2 an end view, and, in

Figures 3 and 4, detached parts, to more clearly illustrate the operation of the same.

Similar letters of reference indicate like parts.

It is well known that in rolling-mills, such as are used for cutlery, &c., it is necessary to pass the material through the rolls two or more times in order to reduce it to the proper thickness. To do this without taking but one heat, a man is required to stand behind the machine, take the article as it leaves the roll, and pass it back to the person operating the machine, to be passed through a second time, and so on until the proper thickness is obtained.

My invention consists of a device whereby the article may be thus passed forward by the person operating the machine, without the aid of a second, and thereby saving the work of one man.

To enable others skilled in the art to make and use my invention, I will proceed to describe the construction and operation of the same.

A A are rolls, held in a frame, B, and constructed in any known way. C is a pan, of any convenient width, provided with a swinging jaw or valve, *a*, for the purpose of receiving the article when it leaves the rolls.

D is a bar, to which the pan C is attached, and is arranged to slide through a swivel-guide, *b*, by means of a rope or other strap, *c*, wound upon a barrel, E.

F is a double-joint lever or hinge attached to the bar D, and connected with the frame, for the purpose of carrying the said bar and pan, to which it is attached, in their upward movement, clear of the roll A, and also carry it forward over the upper roll, as denoted in red, fig. 1.

G is a friction-pulley, which drives (when closed) the barrel E, and the said pulley is closed by means of a lever, *d*, cam, *e*, and treadle, *f*.

g is a weight attached to the jaw or valve *a*, for the purpose of raising the same.

This completes the construction of my improvement.

The operation is as follows: After the article has passed through between the rolls and into the pan C, the foot is placed upon the treadle *f*, which, by means of the cam *e* and lever *d*, closes the friction-pulley G, thereby imparting motion to the barrel E. Said barrel revolving, winds up the rope or strap *c*, which first closes the jaw or valve *a*, thus tightly holding the article between it and the bottom of the pan C, as shown in fig. 4, and afterward (the barrel continuing to revolve) raises the pan C and bar D, guided by the hinge F, from the position in black to the position in red, as shown in fig. 2. Having obtained this position, the article may be grasped from the front. The friction-pulley G being unclosed, loosens the rope or strap *c*, which allows the raising of the jaw or valve *a* by means of the weight *g*, as shown in red in fig. 4. The article may then be taken from the pan, which is immediately carried back to its original position.

In order to insure the backward movement of the pan, and throw it beyond the centre of gravity, I place a spring, *h*, upon the frame, to operate upon the hinge, as shown in fig. 2.

Having thus fully described my invention, what I claim as new and useful, and desire to secure by Letters Patent, is—

The pan C, with the valve *a* attached, and its peculiar construction, with the perpendicular bar D and double-jointed lever F, by which it is carried around and over the upper roll, and presented to the man in front of the machine, substantially as herein specified.

ELIAS SANFORD.

Witnesses:

ORVILLE H. PLATT,

JAMES P. PLATT.