2 Sheets—Sheet 1.

G. H. NUSSEY & W. B. LEACHMAN.

MACHINE FOR PRESSING WOVEN FABRICS.

No. 174,699. Patented March 14, 1876.

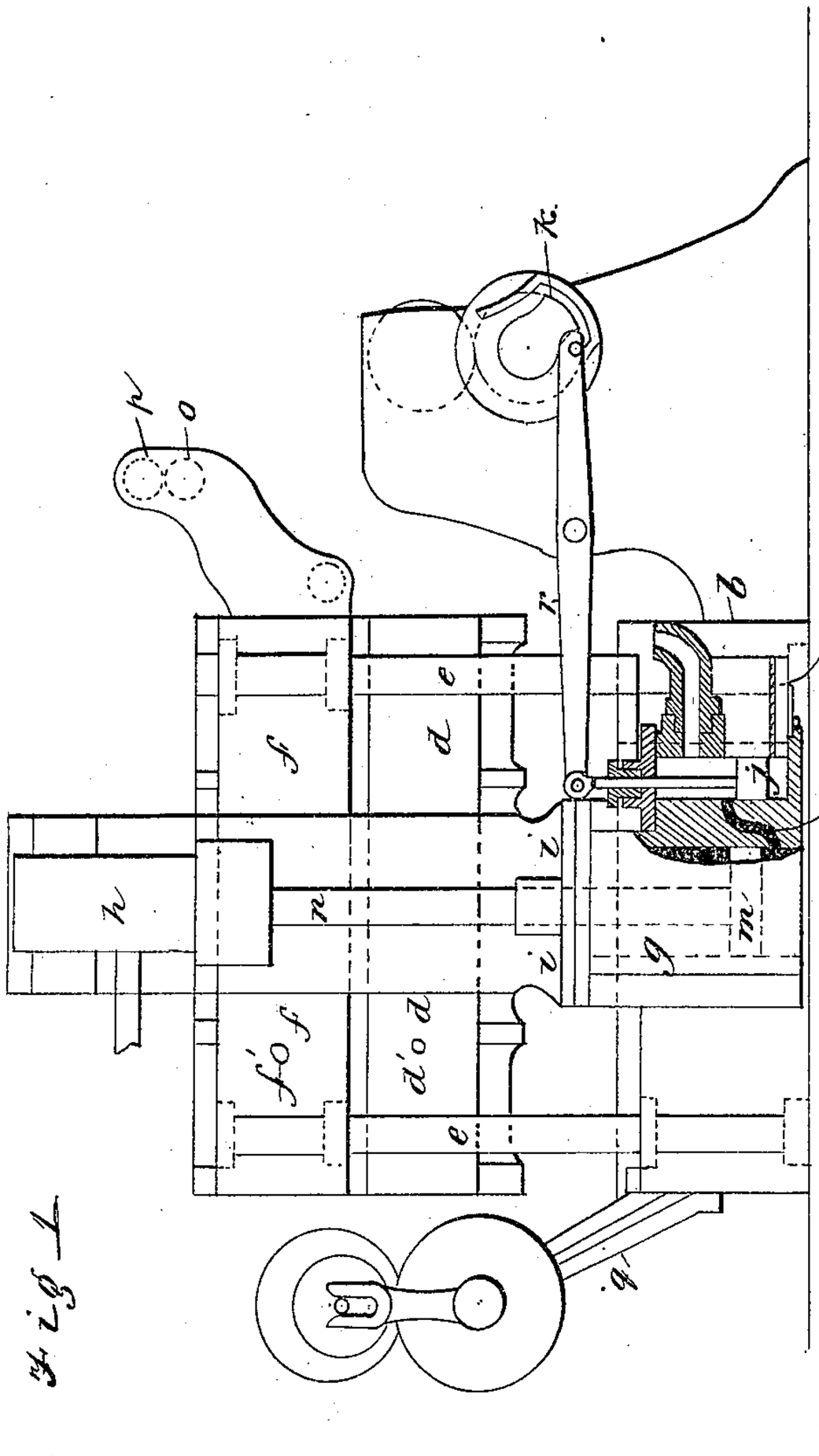

Fig 1.

Witnesses

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2 Sheets—Sheet 2

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Fig 2.

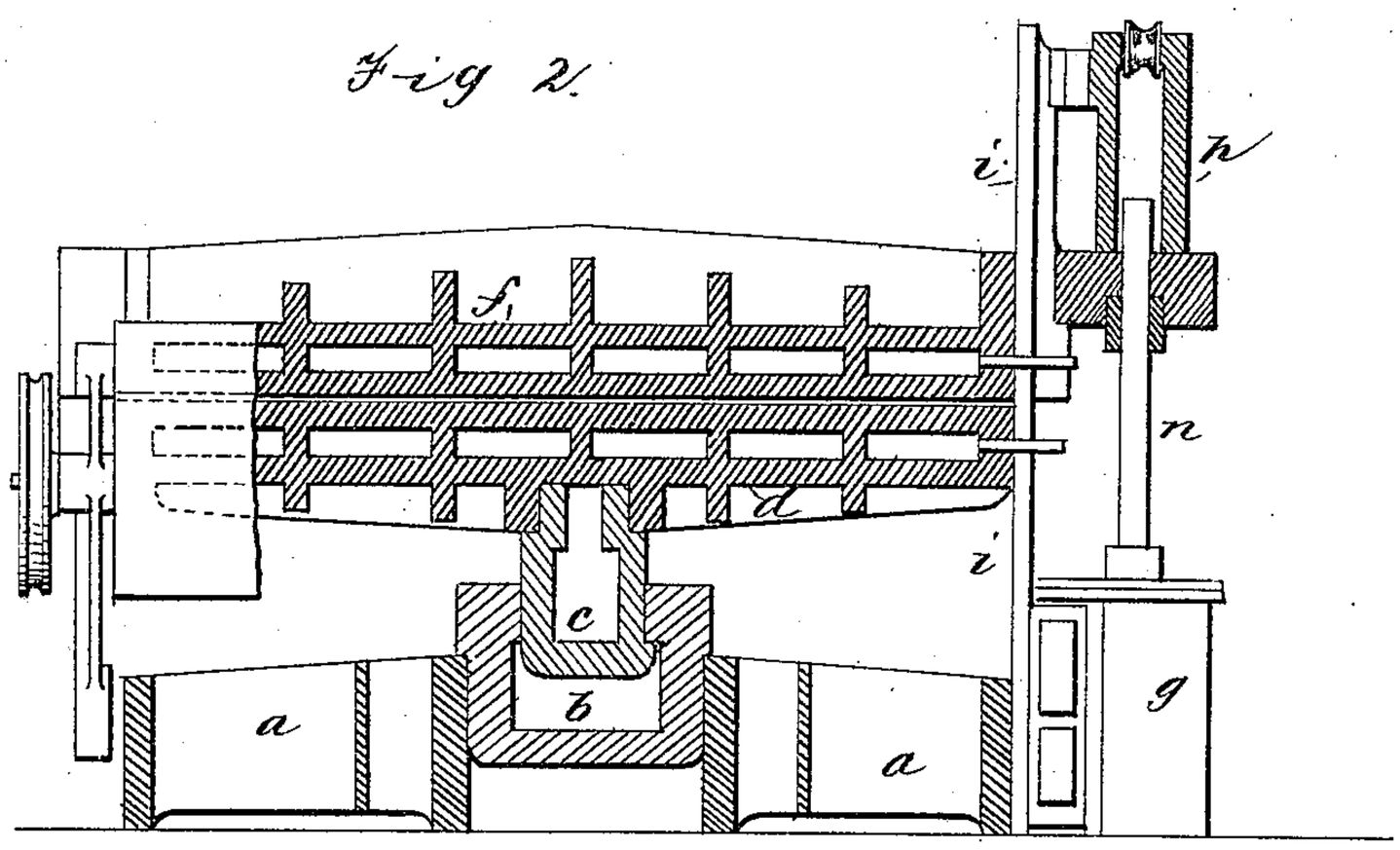

Fig 3.

Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE H. NUSSEY AND WILLIAM B. LEACHMAN, OF LEEDS, ENGLAND.

IMPROVEMENT IN MACHINES FOR PRESSING WOVEN FABRICS.

Specification forming part of Letters Patent No. **174.699**, dated March 14, 1876; application filed February 27, 1875.

To all whom it may concern:

Be it known that we, GEORGE HENRY NUSSEY and WILLIAM BRADSHAW LEACHMAN, both of Leeds, England, have invented an Improved Method of and Machinery for Pressing Woven and Felted Fabrics, (patented in England August, 1872, No. 2,370,) of which the following is a specification:

This invention consists in the combination of a steam-cylinder and hydraulic pump with a ram and pressing-table.

In the drawings, Figure 1 represents an elevation of the machine taken from the side on which the steam cylinder and pump are located; Fig. 2, a partial central sectional elevation through the ram and pressing-table; and Fig. 3, an elevation upon the side on which is located the mechanism for giving the drawing-off rollers their intermittent movement.

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

The general operation of the machine is as follows: The material to be pressed is moved forward toward the pressing-tables by the continuous movement of the delivery-rollers. It is drawn in between the pressing-surfaces by the drawing-off rollers, which have an intermittent movement harmonizing with the action of the vertically-moving pressing-table, so that no strain is exerted upon the cloth while it is subjected to the pressing action.

a, Fig. 2, represents a strong foundation-plate; *b*, a hydraulic cylinder, provided with a ram, *c*, as shown. *d* represents a cast-iron table, secured to the top of the ram, and adapted to move with it in a vertical direction. *e*, Fig. 1, represents proper standards supporting a strong upper plate, *f*, which is so held that a suitable distance intervenes between its lower face and the upper face of table *d*. *g* represents a steam-cylinder, provided with a slide-valve, *j*, operated by a lever, *r*, moved by a tappet, *k*, or other proper means. *m* represents the piston of a steam-cylinder, and *n* the piston-rod, which latter serves also as a plunger in the hydraulic pump *h*, as shown in Figs. 1 and 3.

The operation of the parts is as follows: The lever being actuated at regular and proper intervals by the continuously-revolving cam *k*, the slide-valve is depressed to admit steam through the port *l* below the piston *m*, which being thereby raised forces the liquid in the pump *h* through proper connecting-pipes into the cylinder *b*. In consequence of this the ram *c* is, of course, raised and the table *d* elevated to press the goods between it and the table *f*.

The continued movement of the lever *r* in due course of time raises the valve *j*, which shuts off the supply of steam by closing the port *l*, and permits the piston *m* to fall by opening the exhaust *l'*.

The falling of the piston removes the pressure from the pump, so that the table is free to fall. The delivery-rollers receive a continuous movement from any proper source.

The drawing-off rollers are actuated in the following manner: *o* and *p* in Fig. 3 represent these rollers. The lower roller is secured fixedly in the frame, and motion is communicated to it by a friction-roller, resting in a movable frame, which receives a continuous revolution from any proper source. At the proper time in the movement of the machine the movable frame is raised by proper mechanism, so that no motion is communicated to the drawing-off rollers, this occuring, of course when the cloth is being pressed. When the pressing-plate, however, descends the continuously-revolving roller also descends, and communicates movement to the drawing-off rollers, which take up that portion of the cloth which has just been pressed.

From this description it will be understood that the mechanism is automatic in its action.

The cloth is delivered continuously, but is pressed by the tables and taken up by the drawing-off rollers in a series of intermittent movements, as described.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The combination of the steam-chest, having valve *j* and inlet and outlet openings *l l'*, cylinder *g*, hydraulic pump *h*, and cylinder and ram with the table *d* and plate *f*, as described.

GEORGE HENRY NUSSEY.

WILLIAM BRADSHAW LEACHMAN.

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