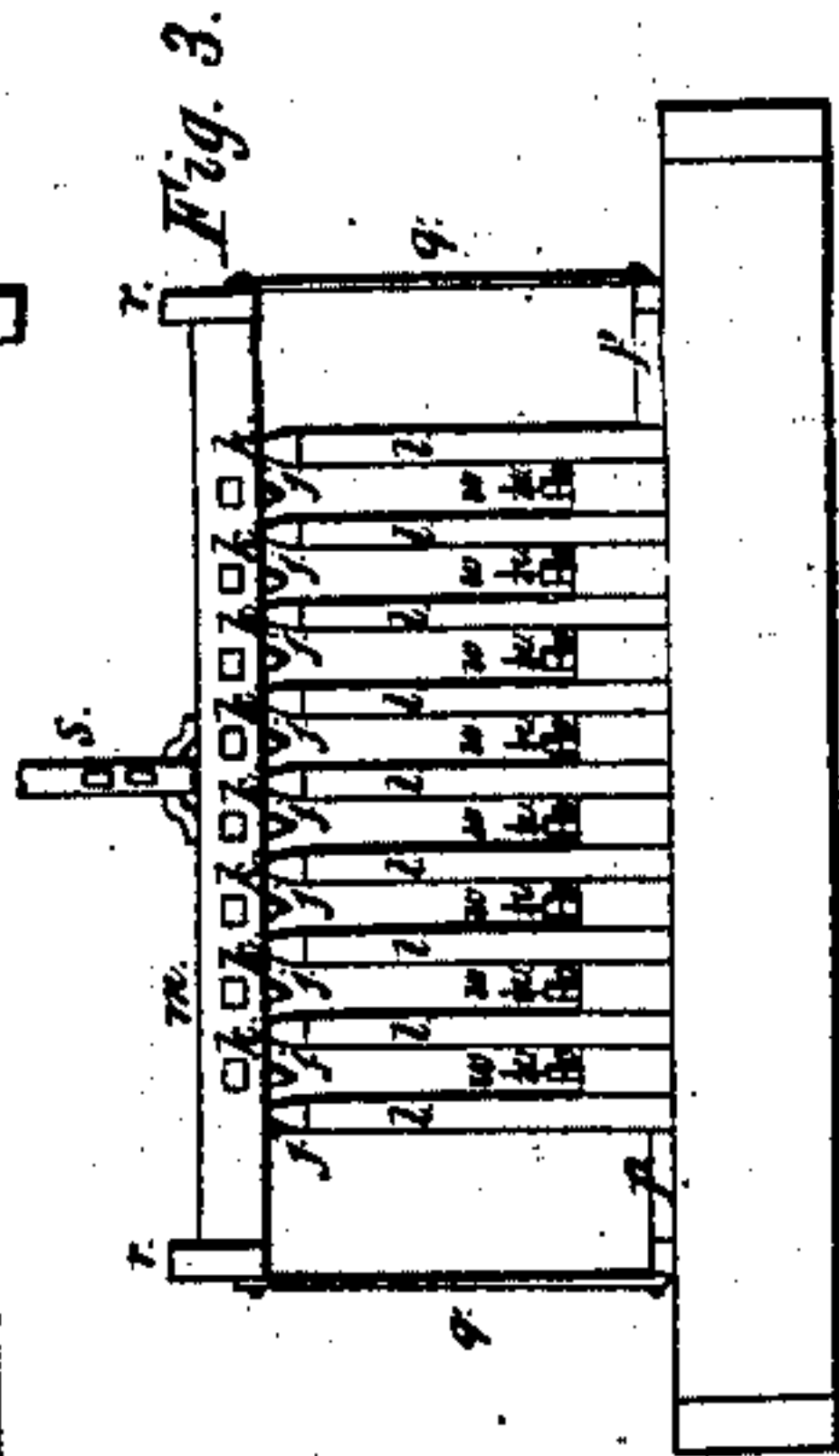
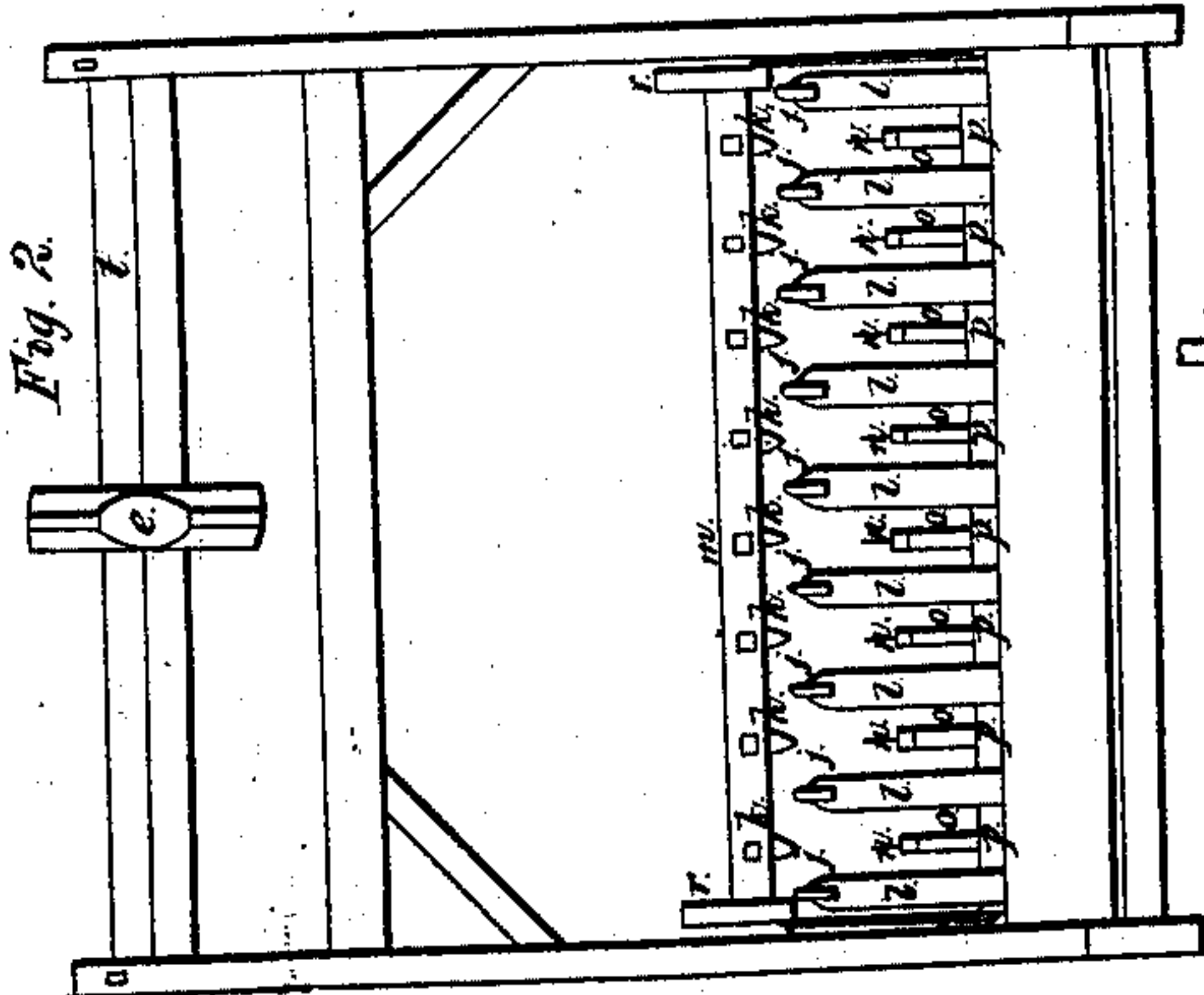
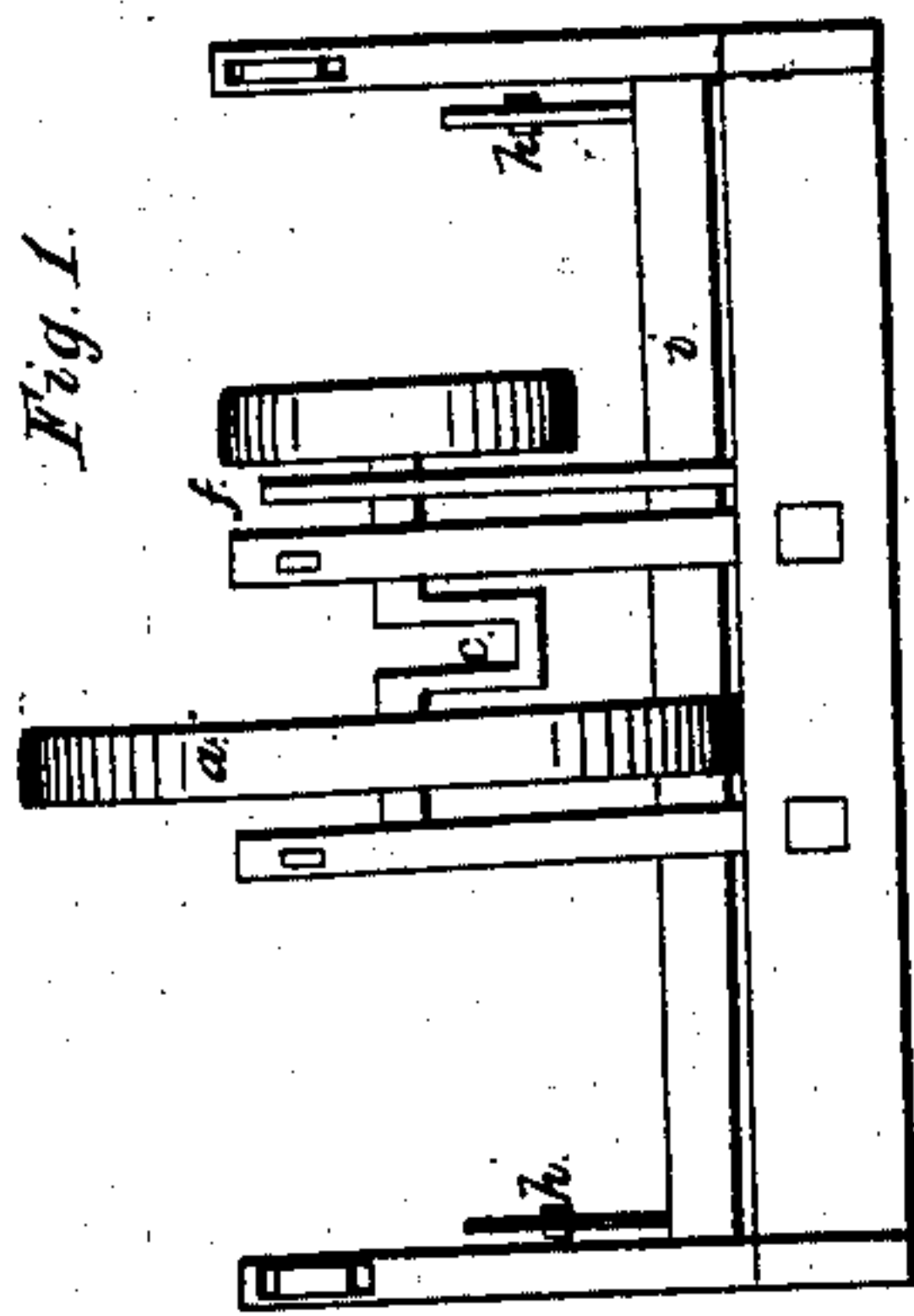
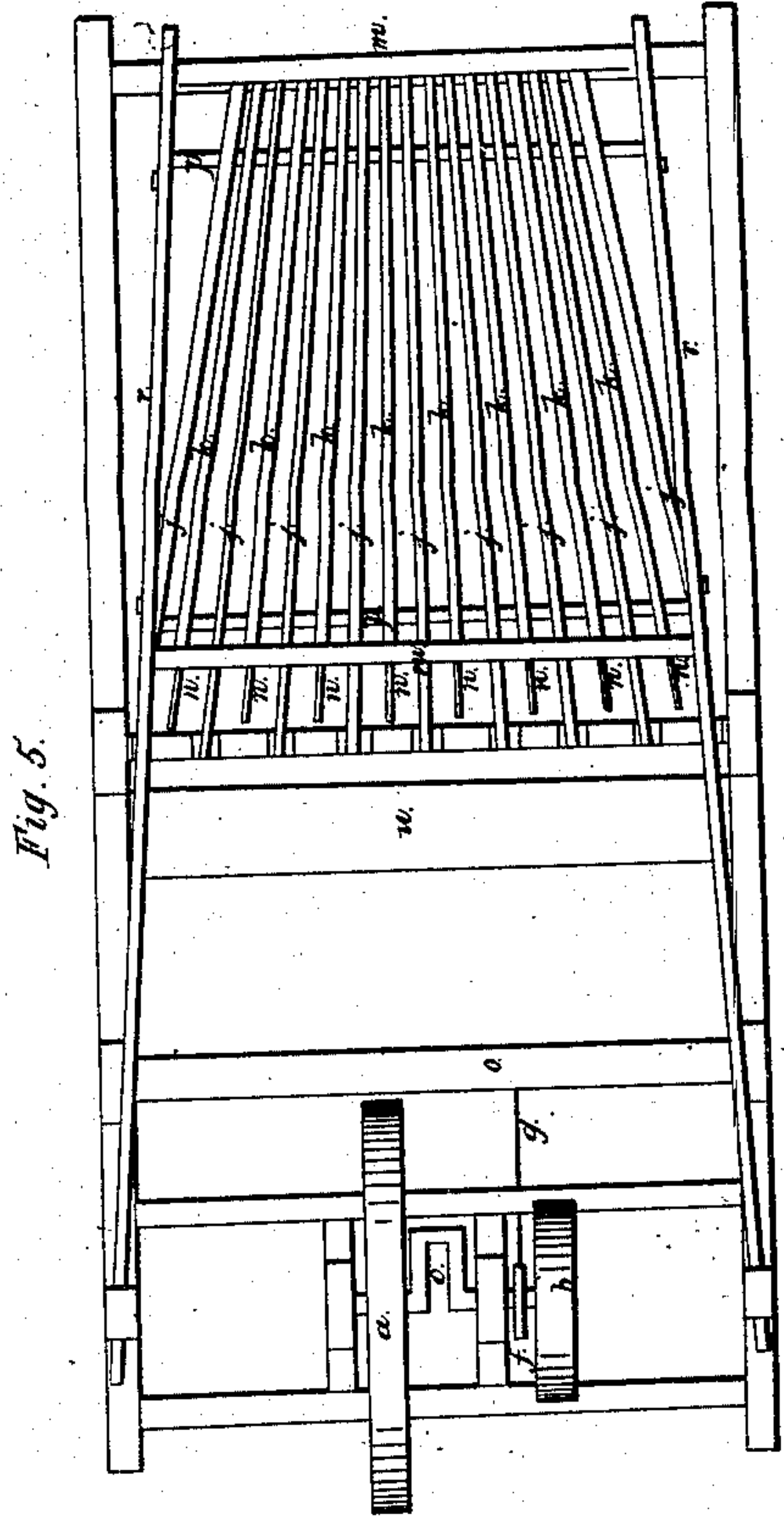
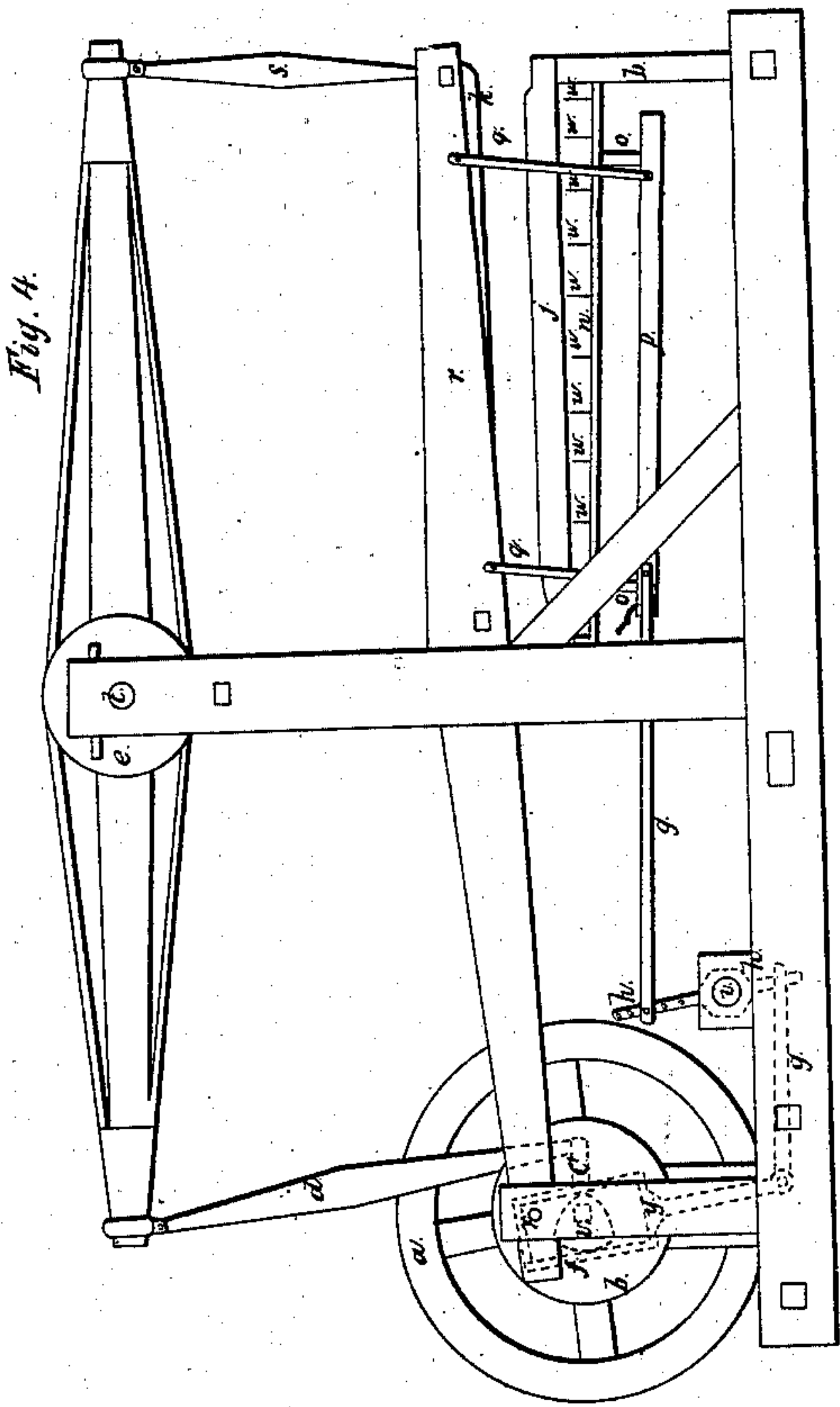


P. M. Walker

Henry Brake.

No. 8,122.

Patented May 27, 1851.



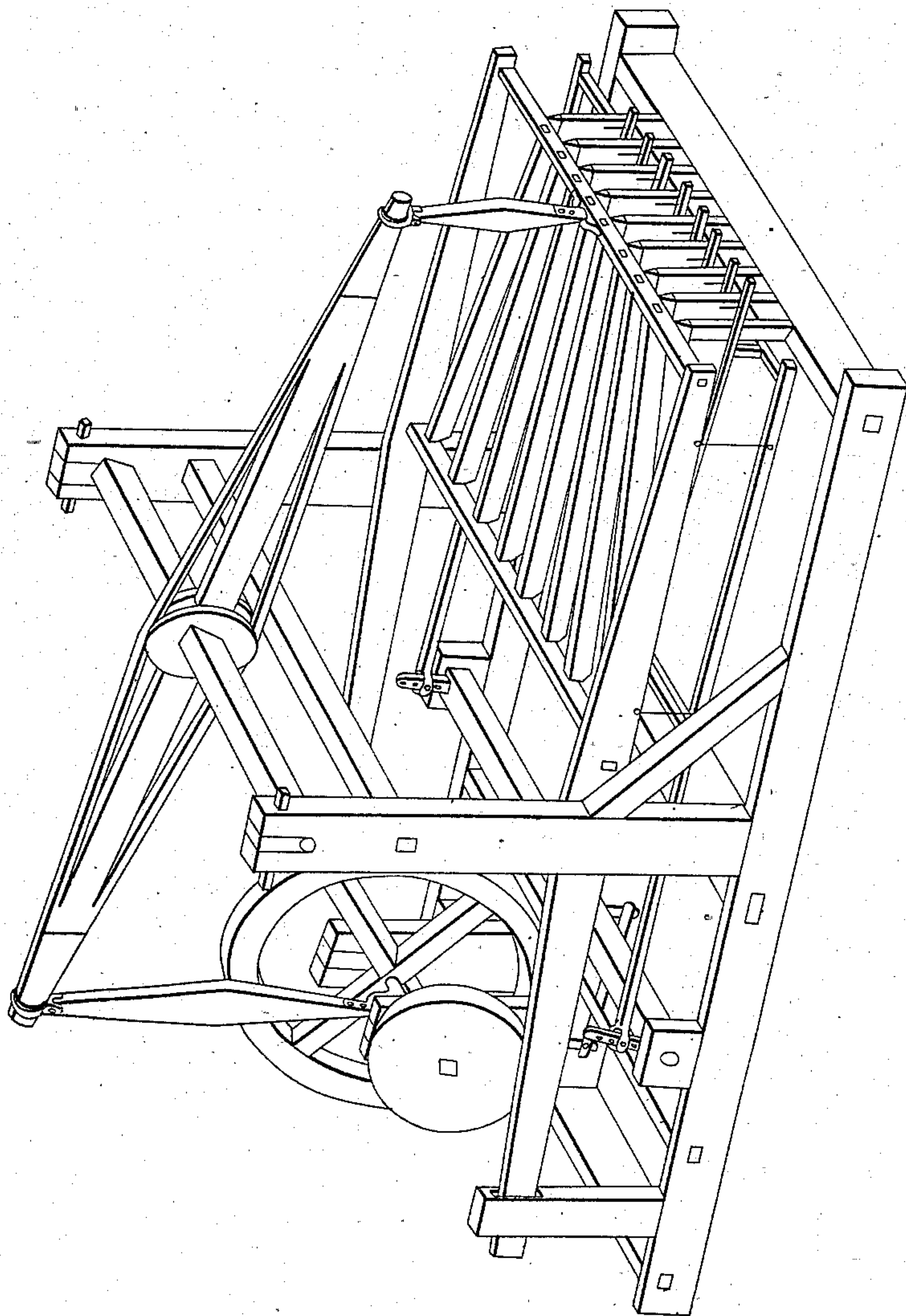
Sheet 2-2, Sheets.

P. M. Walker.

Heavy Brake.

No 8,122.

Patented May 27, 1851.



UNITED STATES PATENT OFFICE.

PARIS M. WALKER, OF MARSHALL, MISSOURI.

IMPROVEMENT IN HEMP-BRAKES.

Specification forming part of Letters Patent No. 8,122, dated May 27, 1851.

To all whom it may concern:

Be it known that I, PARIS MARION WALKER, of Marshall, in Saline county, and State of Missouri, have invented a new and useful Machine for Breaking Hemp, called "Walker's Hemp-Brake;" and I do hereby declare the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Plate 1 is a perspective view. Figures 1 and 3, Plate 2, are end sections. Fig. 2, Plate 2, is a transverse section from the center. Fig. 4, Plate 2, is a longitudinal elevation; and Fig. 5, Plate 2, is a ground elevation without the walking beam and pitmen.

a is a fly-wheel; *b*, pulley; *c*, crank; *e*, walking-beam; *f*, cam-yoke; *g*, connecting-rods; *h*, feeding-arms; *i*, rocking shaft; *j*, lower slats; *k*, upper slats; *l*, supports for lower slats; *m*, timbers supporting the slats; *o*, supports for feeding-slats; *p*, feeding-frame; *q*, iron rods securing the feeding-frame to the upper part of the brake; *s*, connecting-pitman; *t*, walking-beam shaft; *u*, position of the person feeding the machine; *v*, cam; *w*, pins in the feeder; *x*, pivot or pin on which the upper part of the brake works; *y*, pivot of cam-yoke. The breaking part of the machine is composed of slats five inches wide, one and a half inch thick, reduced on the upper edge to half an inch, and then rounded. Nine of these, *j*, Plate 2, Figs. 2, 3, 4, and 5, form the lower part, and are seven and a half feet long, resting upon independent upright supports. They are let into those marked *l*, Fig. 2, Plate 2, and secured by mortise and tenon on the top of those marked *l*, Plate 2, Fig. 3, and are ten inches from center to center in Fig. 2, Plate 2, and six inches in Fig. 3, Plate 2.

The upper part of the brake is composed of eight similar slats, *k*, Plate 2, Figs. 2, 3, 4, and 5, six and a half feet long, and are arranged in the intermediate spaces between the lower slats, and are secured by mortises and tenons into the cross-timbers *m*, Plate 2, Figs. 2, 3, 4, and 5, which timbers are three by four inches, and are framed into the side pieces, *r*, Plate 2, Figs. 2, 3, 4, and 5, which side pieces are two inches by twelve in the center, and six inches at the ends, and is worked on the pin *x*, Plate 2, Fig. 4. The whole in its form and working resembles the common hand-

brake, except that the number of slats is increased, so that the whole length of the hemp is brought under the action of the brake at once. When shut down, the slats close in upon each other four inches at the narrow end, while the cross-timber *m*, Plate 2, Fig. 2, is framed in one inch higher than *m*, Plate 2, Fig. 3, and the supports *l*, Plate 2, Fig. 2, are one inch lower than those marked *l*, Plate 2, Fig. 3, and a reduction of the slats at that point brings the edges of the upper and lower ones to a level. The upper part of the brake is connected by the pitman *s*, Plate 2, Fig. 4, to the walking-beam *e*, Plate 2, Fig. 4, which walking-beam is again connected by the pitman *d*, Plate 2, Fig. 4, to the crank *c*, Plate 2, Figs. 1, 4, and 5, which crank is nine inches long and two inches square. Upon the shaft of this crank is a heavy wooden fly-wheel *a*, Plate 2, Figs. 1, 4, and 5, five feet in diameter, a pulley *b*, Plate 2, Figs. 1, 4, and 5, thirty inches in diameter, by which the machine is driven by a belt from the horse-power, four inches wide, and a three-point cam, *v*, Plate 2, Fig. 4, of eight inches, giving a stroke of two and a half inches. The cam-yoke *f*, Plate 2, Fig. 4, works on a pivot, *y*, Plate 2, Fig. 4, and gives motion through the connecting bars *g*, Plate 2, Figs. 4 and 5, and the arms *h*, Plate 2, Figs. 1 and 4, of the rocking shaft *i*, Plate 2, Figs. 1, 4, and 5, to the feeder. The feeder is formed of eight slats, *u*, Plate 2, Figs. 2, 3, 4, and 5, seven and a half feet long, one and a quarter inch wide, and three-quarters of an inch thick, having iron pins *w*, Plate 2, Figs. 3 and 4, four inches long, on the upper edge at intervals of four inches, and secured at the same angles and distances apart as the slats *k*, Plate 2, Fig. 5, by mortises and tenons, upon small upright pieces *o*, Plate 2, Figs. 2, 3, and 4, six inches long, and one and a half inch square. These are secured by mortises and tenons into the frame-work of the feeder *p*, Plate 2, Figs. 2, 3, 4, and 5, which frame-work is made of four timbers, one and a half by three inches, is six feet long, and the same width as the frame-work of the upper part of the brake to which it is attached, and is suspended perpendicular under it by the rods, *q*, Plate 2, Figs. 2, 3, and 4, at such distance that when the upper part of the brake is raised the slats of the feeder will be one inch above the lower slats of the brake.

The frame-work of the machine is good solid oak, four inches thick, put together as in the drawings, which are on a scale of half an inch to the foot.

The mode of operating the machine is thus: An attendant standing upon the frame-work at *u*, Plate 2, Fig. 5, receives the hemp and places it upon the lower slats, *j*, Plate 2, Fig. 5, at *u*, Plate 2, Fig. 5. As the upper part is raised by the action of the crank, the feeding-slats rise between the lower slats, lifting the hemp clear of the lower slats, *j*, Plate 2, Figs. 2, 3, 4, and 5, and carrying it forward by the motion communicated to it by the cam under the upper part of the brake. At every rise the hemp is carried forward six inches, until

it is delivered at the end of the machine thoroughly broke and nearly clean. A little beating and shaking finishes the article fit for market, the brake making from eighty to one hundred strokes per minute.

What I claim as my invention, and wish to secure by Letters Patent, is—

The combining a sufficient number of slats to break the full length of the hemp at once, in combination with the manner of feeding, substantially as set forth.

PARIS M. WALKER.

Witnesses:

GEO. C. WETMORE,
J. LOCKE HARDEMAN.