

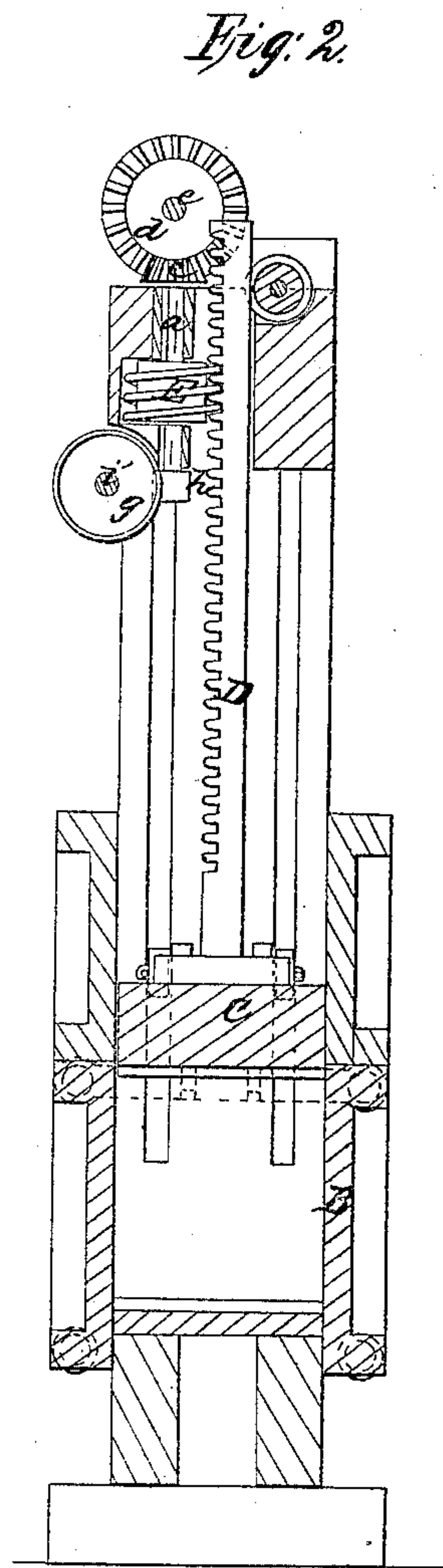
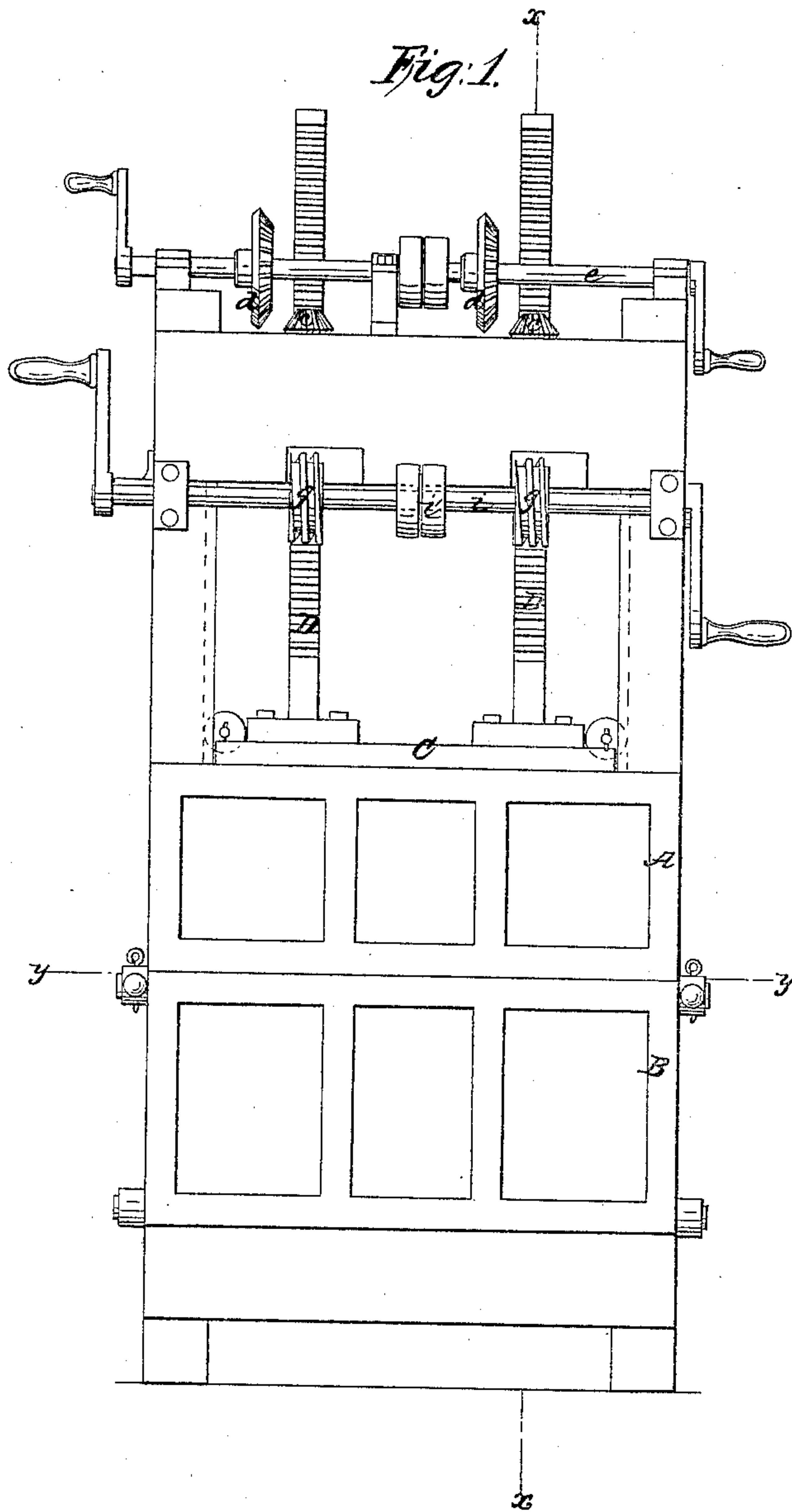
J. P. White,

Sheet 1-2 Sheets.

Hay Press,

No. 44,842,

Patented Oct. 25, 1864.



Witnesses,
Thomas Gannon
Chas. Trach

Inventor,
Joseph B. White

Sheet 2 of 2 Sheets.

J. P. White,
Hay Press,
No. 44,842, *Patented Oct. 25, 1864.*

Fig. 3.

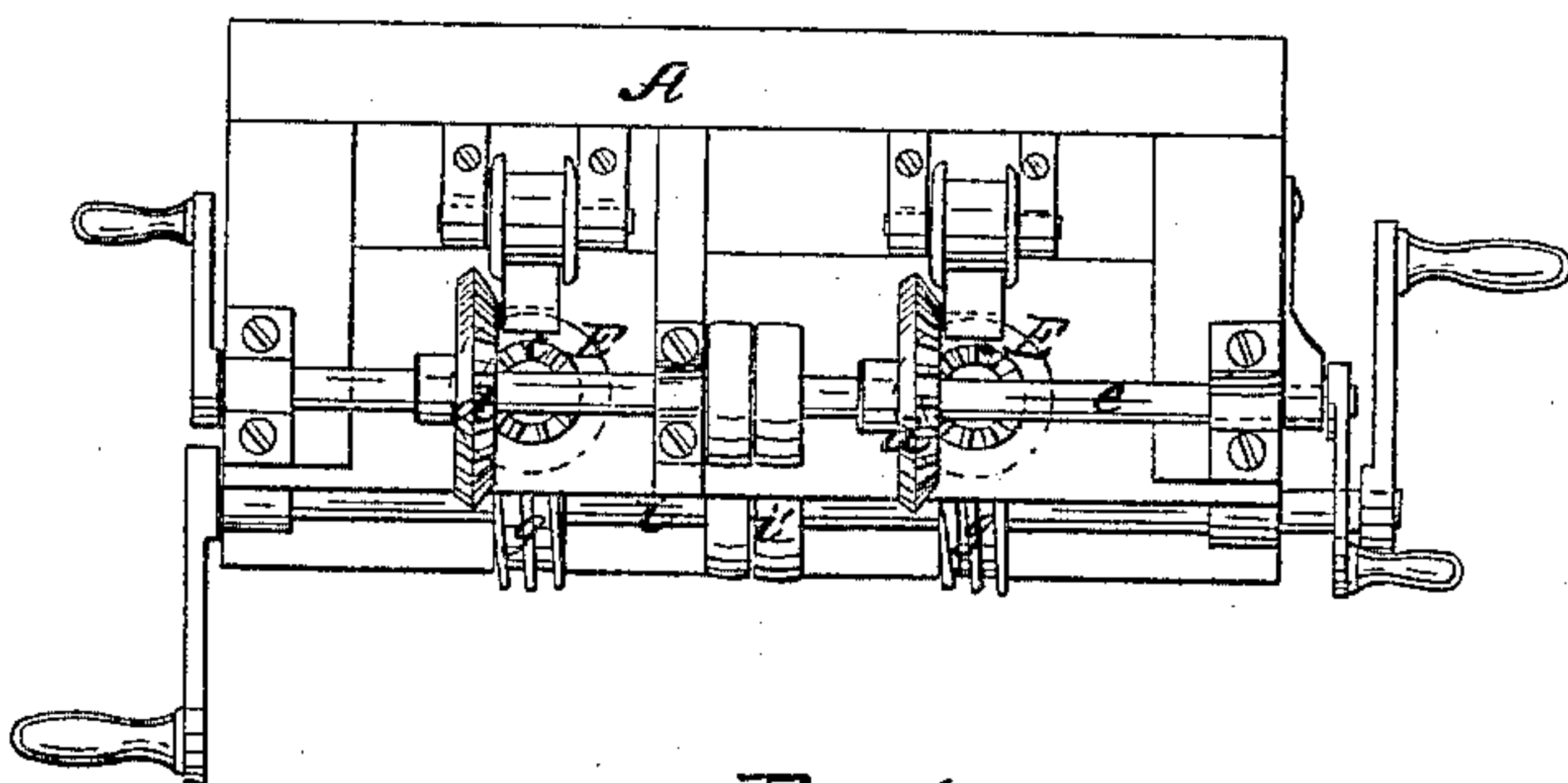
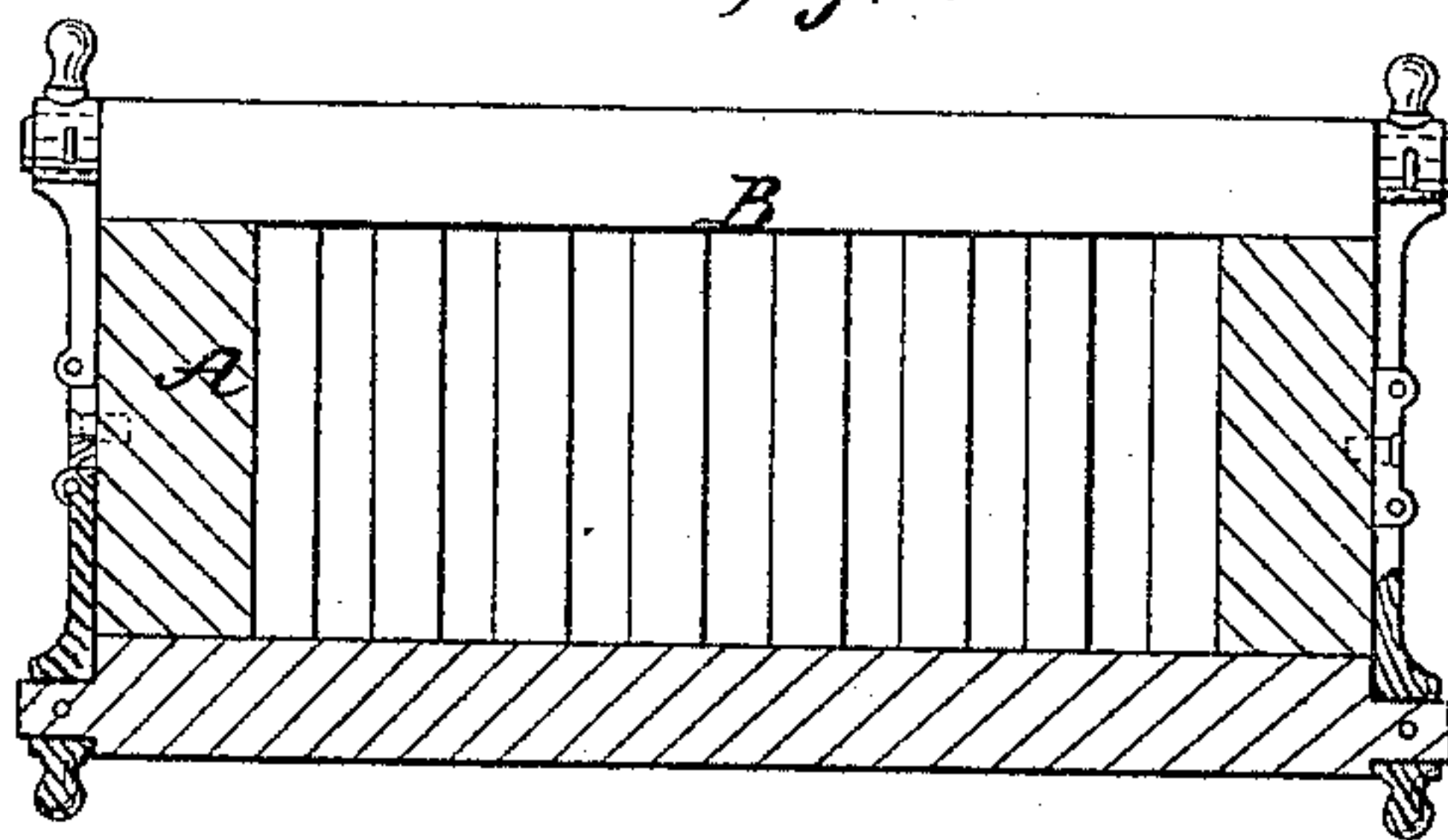


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOSEPH P. WHITE, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND THOS. GANNON, OF SAME PLACE.

IMPROVEMENT IN PRESSES.

Specification forming part of Letters Patent No. 44,842, dated October 25, 1864.

To all whom it may concern:

Be it known that I, JOSEPH P. WHITE, of No. 418 Greenwich street, in the city, county, and State of New York, have invented a new and Improved Press; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front elevation of this invention. Fig. 2 is a transverse vertical section of the same, the line *x x*, Fig. 1, indicating the plane of section. Fig. 3 is a plan or top view of the same. Fig. 4 is a horizontal section of the same, taken in the plane indicated by the line *y y*, Fig. 1.

Similar letters of reference indicate like parts.

This invention consists in the employment or use of one or more worms secured to a longitudinally-adjustable horizontal shaft, and gearing in a corresponding number of worm-wheels, secured to vertical arbors, each of which carries a worm-gearing in a toothed rack, which rises from the follower of the press, and also a bevel-pinion gearing in a wheel mounted on a horizontal longitudinally-adjustable shaft in such a manner that either of the two horizontal shafts can be thrown in gear with the rack or racks rising from the follower, (and the motion of the follower,) and the power acting on the same can be graduated to be quick and less powerful at the beginning of the operation and slow and very powerful toward the end of the operation, or after the material has been compressed to a certain degree by the quick motion.

A represents a frame built of timber or of iron, if desired, very strong and substantial. The lower part of the frame is occupied by the press-box B, the sides of which are made to swing open, so that the material to be pressed can be readily tied, and the bales, after they have been formed, can be removed. In order to facilitate the removal of the bales when ready, the ends of the press-box may also be made movable by means of an eccentric cam lever or by screws, or any other suitable contrivance.

The follower C is suspended from two (more

or less) toothed racks, D, which extend up within or outside of the frame A, and these racks gear in worms E, that are mounted on arbors *a*, which have their bearings in suitable boxes attached to the inside of the frame A, as clearly shown in Fig. 2 of the drawings. The arbors *a* are rotated by bevel-pinions *c*, which gear in bevel-wheels *d*, mounted on an arbor, *e*, that has its bearings in suitable boxes on the top or end of the frame A. By turning the arbor *e* in one direction the follower is moved down, and by turning said arbor in the opposite direction the follower is moved up, and the speed with which the follower moves is rendered pretty quick by the proportion which the bevel-wheels *d* bear toward the pinions *c*. The arbor *e* is rotated by means of cranks, or it may be furnished with suitable pulleys and driven by power, and it is arranged in its boxes in such a manner that a longitudinal sliding motion can be imparted to it to throw the wheels *d* out of gear with the pinions *c*. A hinged dog, *f*, catching over the end of the arbor, retains it in the desired position, and prevents the wheels *d c* getting out of gear spontaneously.

In order to produce a slow and powerful motion of the follower, worm-wheels *h* are mounted on the ends of the arbors *a* opposite the pinions *c*, and worms *g*, secured to a horizontal shaft, *i*, can be thrown in gear with the same by shifting said shaft in a longitudinal direction. This shaft has its bearings in suitable boxes on the side of the frame A, and it is so arranged that it can be moved in a longitudinal direction the same as the shaft *e*. It is turned by cranks or any other suitable means, and in practice motion will be imparted to it by a belt running over a suitable pulley, *j*. At the beginning of the operation the slow motion of the follower is thrown out of gear, the follower is raised by the quick motion, the material to be pressed is introduced in the press-box, and, after the latter has been closed, the follower is run down by the quick motion as far as it will go. The slow motion is then thrown in gear, and the final compression of the bale is effected. When the slow motion is in gear, the quick motion may be thrown out or not, as may be desired; but if the quick motion is to be used, the slow motion must be thrown out of gear. When

a bale is finished, the follower is run up by the quick motion, the bale is removed from the press-box, fresh material is introduced, and the operation of pressing is again commenced, as above described. A large number of bales can thus be worked off in a comparatively short time and with very little labor. The press is very powerful. It can be worked upright or in the horizontal position, and it can be used for cotton, hay, tobacco, or any other material which may be compressed.

I claim as new and desire to secure by Letters Patent—

The worms E, toothed racks D, with or without bevel-gears *c* *d*, in combination with the worms *g* and worm-wheels *h*, and with the follower C of a press-box, constructed and operating substantially as and for the purpose set forth.

JOSEPH P. WHITE.

Witnesses:

THOS. GANNON,

THEO. TUSCH.