T. H. Burridge. Sheet 1. 2 Sheets.

Printing Press.

No. 26545. Patented Dec. 20. 1859.

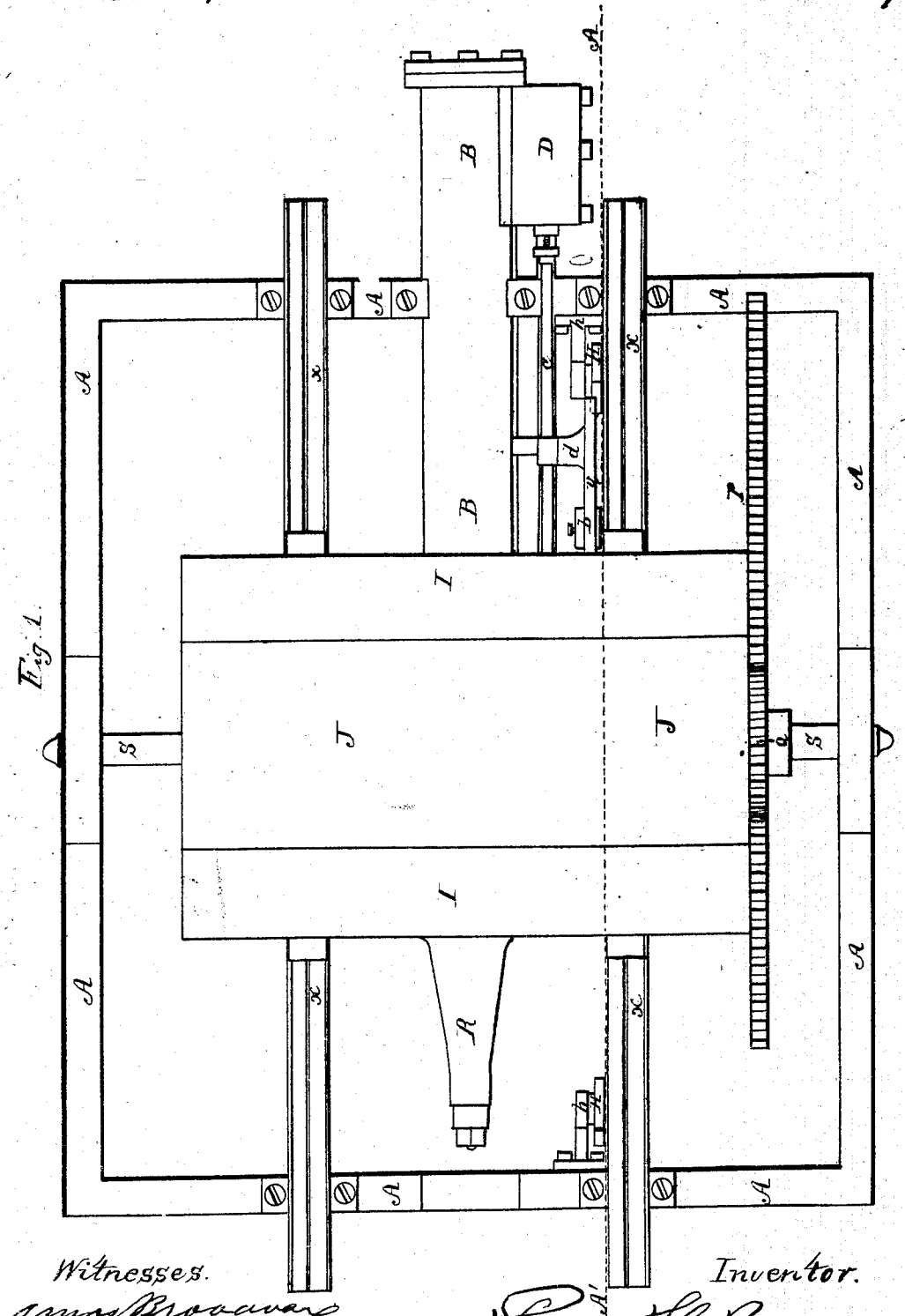


Fig. 1.

Witnesses.

Amos Broadway

L. E. Gray

Inventor.

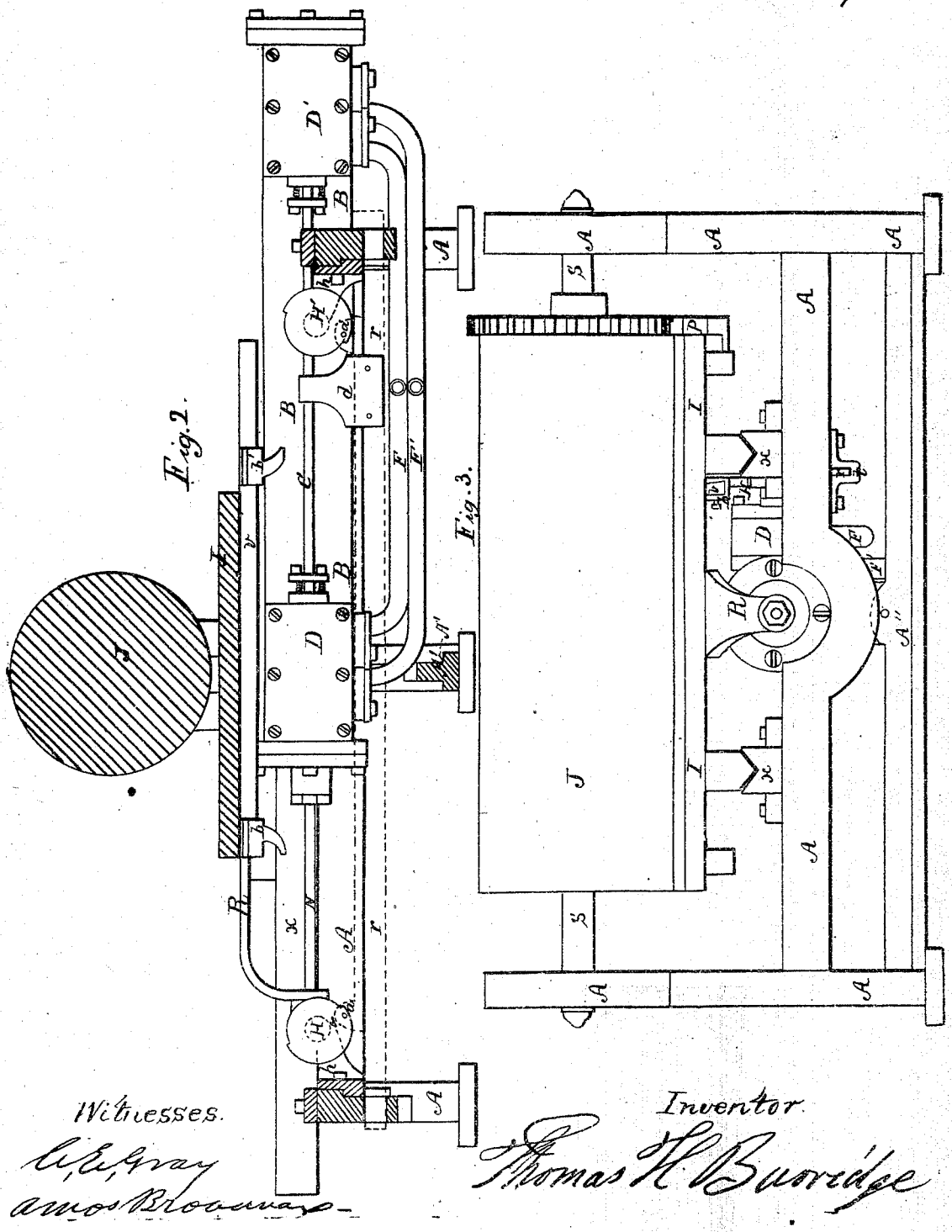
Thomas H. Burridge

Sheet 2. 2 Sheets.

T. H. Burridge,

Printing Press.

No. 26545. Patented Dec. 20. 1859.



Witnesses.

A. E. Gray

Amos Bloomer

Inventor

Thomas H. Burridge

UNITED STATES PATENT OFFICE.

THOMAS H. BURRIDGE, OF ST. LOUIS, MISSOURI, ASSIGNOR TO HIMSELF AND THOMAS W. USTICK, OF SAME PLACE.

PRINTING-PRESS.

Specification of Letters Patent No. 26,545, dated December 20, 1859.

To all whom it may concern:

Be it known that I, THOMAS H. BURRIDGE, of the city and county of St. Louis and State of Missouri, have invented a new and useful Improvement in Printing-Presses; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawing, making a part of this specification, in which—

Figure 1 is a top view, Fig. 2 a longitudinal section through A′ A′, and Fig. 3 is a front elevation.

My invention consists in imparting the ordinary motion to the table of a printing press, by applying steam power directly to the table of the press, without complexed machinery of any kind, intervening between the table and the piston-rod of the engine.

To enable others skilled in the arts to which my invention appertains to make and use the same I will proceed to describe the construction and operation thereof.

Similar letters of reference represent corresponding parts of the different figures of the drawing annexed.

The frame of the machine is shown upon the drawing at A, and it may be made of the form and proportion shown upon the drawing or of such other form and proportion as will best fill the conditions of strength and convenience. Across the top of the frame there are two "bedways" fixed shown at H, and upon these ways the table, I is laid, which has bearing pieces cast on its under side to correspond with the ways, upon which the said table reciprocates after the manner of an ordinary reciprocating printing press.

The steam cylinder is shown at B. It is secured to the frame, so as to lie upon a horizontal plane—directly under the table of the press. The steam cylinder is of the ordinary construction as is also the steam chest. The valves are of the ordinary reciprocating kind and the rod C may be attached to them after any of the ordinary methods. The steam pipe is shown at F and the exhaust pipe is shown at F′.

The piston rod of the engine is shown at N, and it is connected to the table of the press by means of the arm R which is bolted to the table so as to form a part of it, which thus establishes a direct application of the piston rod to the table—whereby the said table is made to receive the same motion, and of the same extent and duration—that the piston does, and has. The extent of the motion of the piston, is regulated by the action of the valves, which admit the steam to the alternate ends of the cylinder at different times, which thus governs the extent or distance traveled by the piston in each direction.

The valves are operated by means of tappets *b b*, fixed upon a bar *v*, attached, to the table of the press. These tappets act upon the cam levers H H, which are fixed upon centers in the brackets *h*, and which are connected together by means of a bar *r r* shown in dotted lines, and this bar is connected to the valve stem C by means of the arm *d* so that when the tappet *b′* strikes the cam H′ the steam is admitted to the cylinder through the chest D′ and vice versa. Now the tappets *b b′* are adjustable—so that the distance the piston travels is regulated by the distance the tappets are apart—thus if the tappets are far apart the distance traveled will be short and vice versa—but in no case does the piston travel the full length of the cylinder as one of the objects of this invention is to arrest the momentum of the table, by causing the piston to cushion against the steam which has been admitted to the back side of the piston before it arises to end of its stroke—thus bringing the table easily to rest and starting it upon its return stroke with little or no stress upon the machine.

J is a roller and *s* is the axis thereof and Q is a spur wheel fixed to the end of the said roller, which meshes in the cog rack P fixed to the table I, whereby the said roller is made to revolve back and forth. This however constitutes no part of this invention.

It will be seen that the type table is actuated by the direct application of steam power thereto, and that the momentum of the said table is arrested by the cushioning of the same piston against the steam that

gives motion to the said table, which I consider the essential features of my invention.

What I claim therefore as my invention and desire to secure by Letters Patent is—

The direct application of steam power to the type table of a printing press, and in causing the same piston that actuates the said table to arrest the momentum thereof substantially as described.

THOMAS H. BURRIDGE.

Witnesses:
AMOS BROADNAX,
C. E. GRAY.