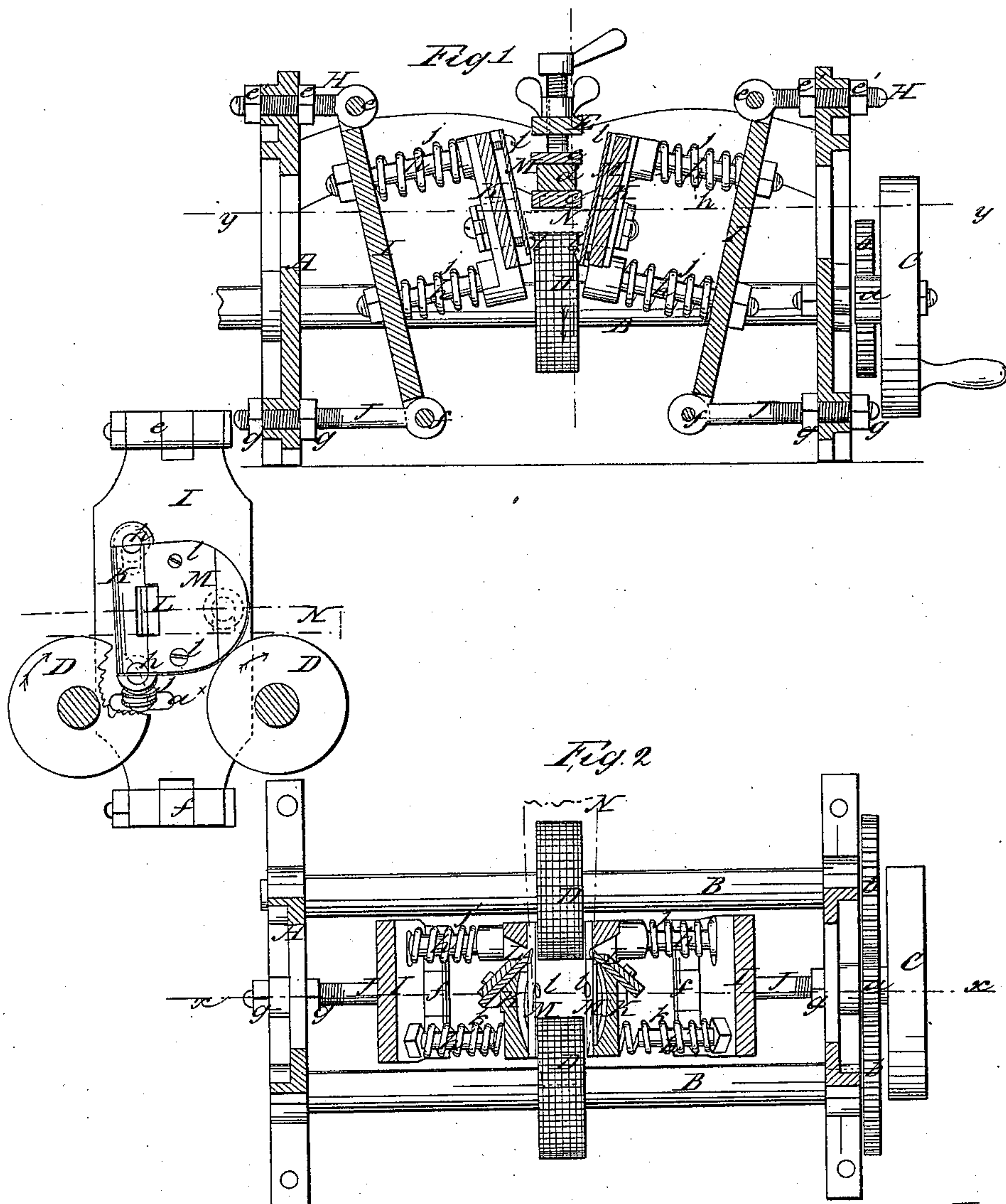


*J. G. Stephenson,
Jointing Staves.*

N^o 24,499.

Patented June 21, 1859.



Witnesses

A. J. Gorris

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J. G. STEPHENSON, OF BUFFALO, NEW YORK.

MACHINE FOR JOINTING STAVES.

Specification of Letters Patent No. 24,499, dated June 21, 1859.

To all whom it may concern:

Be it known that I, JOHN G. STEPHENSON, of Buffalo, in the county of Erie and State of New York, have invented a new and Improved Machine for Jointing Staves; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, is a longitudinal vertical section of my invention, taken in the line x, x , of Fig. 2. Fig. 2, is a horizontal section of the same, taken in the line y, y , Fig. 1. Fig. 3, is a transverse vertical section of the same, taken in the line z, z , of Fig. 1.

Similar letters of reference denote like parts in all the figures.

This invention relates to a machine for performing the finishing operation in jointing staves and is designed to perfect the work roughly performed by ordinary machines.

The invention consists in the employment or use of yielding planers feed rollers and a pressure plate, arranged for joint operation as hereinafter fully described whereby the desired end is attained.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A, represents a framing which may be constructed in any proper way to support the working parts of the machine.

B, B, are two shafts placed longitudinally in the framing A, one at each side of it, and are rotated in the same direction, by a pinion a , gearing into two wheels b, b , placed on each shaft B, see Fig. 2.

C, is a driving pulley attached to the axis of the pinion a . On each shaft B, at about its center a feed roller D, is placed the peripheries of which may be corrugated or toothed. On the framing A, and in the same plane with the feed rollers D, D, a transverse plate or bar E is secured, and F is a screw passing vertically through said bar and through two plates c, c , between which strips d , of india-rubber or other suitable elastic material is placed. Through the plate or bar E, two set screws G, G, pass the lower ends of which bear on the upper plate c ; see Fig. 1.

In the upper part of the framing A, there

are two horizontal screws H, H, one at each end, and to the inner ends of these screws plates I, I, are suspended by joints or hinges e ; the screws H, may be secured at any desired point by jam nuts e' . The lower ends of the plates I, I, are also attached by joints or hinges f , to screws J, J, which are fitted horizontally in the lower part of the framing and are secured therein at any desired point by jam nuts g . Through each plate I, three screw rods h, h, h' , pass; the said rods having nuts i , at their outer ends. Two of these rods h, h , of each plate are placed one over the other in the same plane, and have a plate K, attached to their outer ends. The rods h, h , pass loosely through the plates I, I, and have each a spiral spring j , fitted on them, all of which are shown in Fig. 1. The other rods h' , are attached to the plates I, I, but disconnected from the plates h ; but said rods h' have each a spiral spring k , fitted on them, said springs bearing against the plates K, see Fig. 2.

In each plate K is fitted a planer or cutter L, and to the face side of each plate K, just back of the cutters or planers L, an elastic concave plate M is attached by screws l .

The operation is as follows: Motion is given the pulley C by any proper means and the plates I, I, are adjusted by regulating the screw rods H, J, so that the plates K, K, may be inclined to correspond with the bevel or inclination of the sides of the staves to be jointed, see Fig. 1, in which a stave N, is shown in red. The plates c, c , are also adjusted by turning the screw F, that the lower plate c , may bear on the upper surface of the stave. The staves being previously jointed by any of the ordinary machines are fed through my machine by the rollers D, which rotate in the direction shown by the arrows and the cutters L, take off a clean unbroken shaving the entire length of each side of the stave; the plate K, yielding in consequence of the springs j , to the curved form of the sides of the staves; and the elastic plates M, serving as guides to the stave while the same is passing between the cutters.

By this invention the sides of the staves may be made perfectly smooth and perfect joints formed. The staves, while passing through the machine, are kept down upon

the rollers by the lower plate *c*, which is allowed to yield or give to a certain extent, to conform to the inequality of the stave, in consequence of the elasticity of the strip *d*.

5 The lower screw rods *h*, are fitted in oblong slots *a*^x, in the plates *I*, in order that the planers *L* may be placed in oblique positions as shown in Fig. 3, and thereby enable the planers to act on the sides of the
10 staves with a "drawing cut." This position of the planers or cutters would be preferable, as it insures a smoother cut.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is:

15 The adjustable plates *I*, *I*, with yielding cutter-stocks or plates *K*, *K*, attached in connection with the feed rollers *D*, *D*, and yielding pressure plate *c*, or its equivalent, the whole being arranged to operate sub-
20 stantially as and for the purpose set forth.

JOHN G. STEPHENSON.

Witnesses:

I. I. GORRIS,
W. DOWNIE.