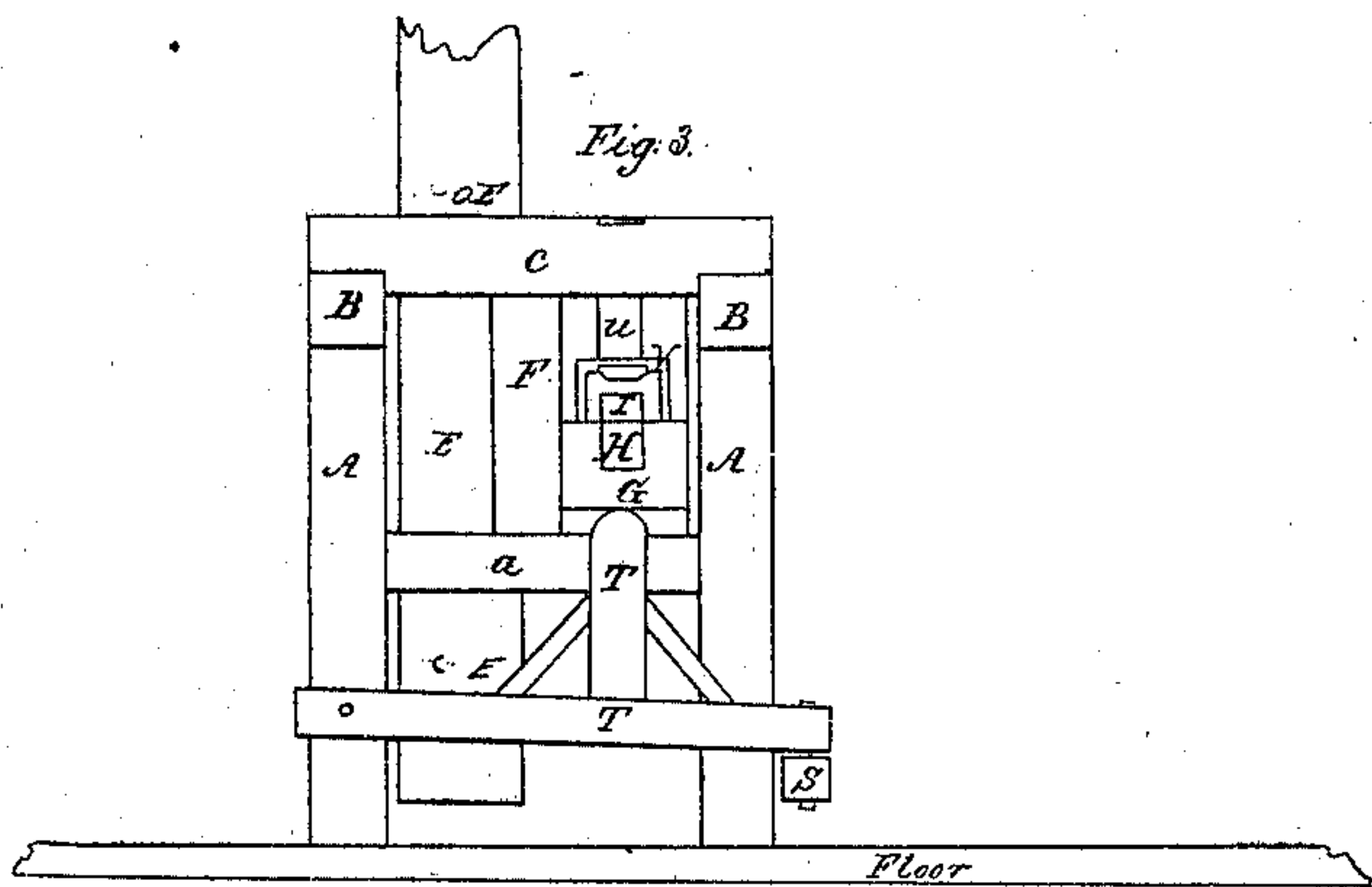
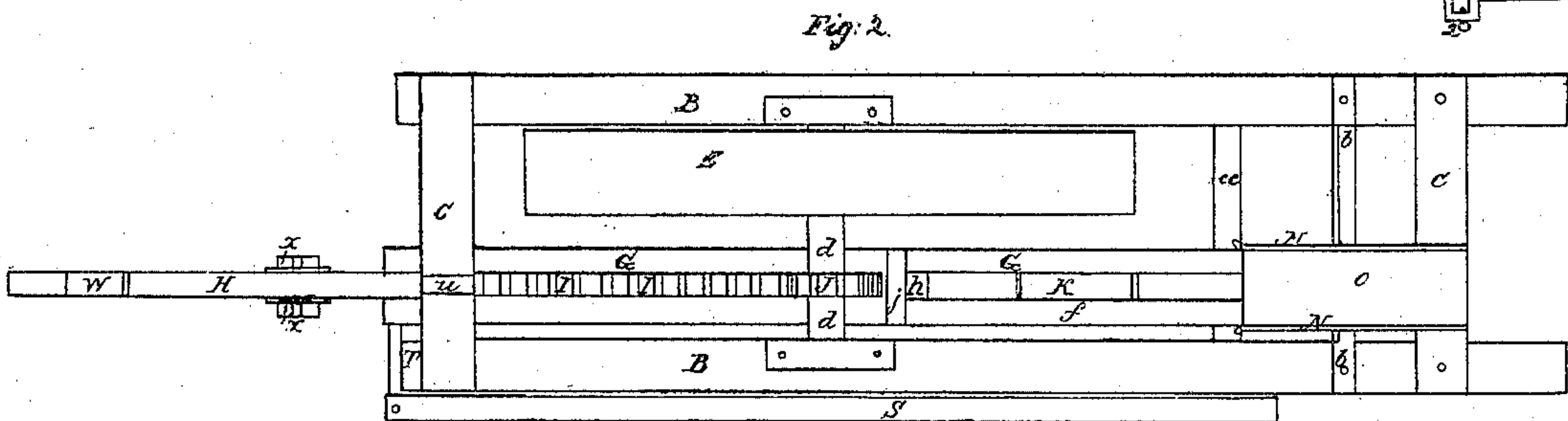
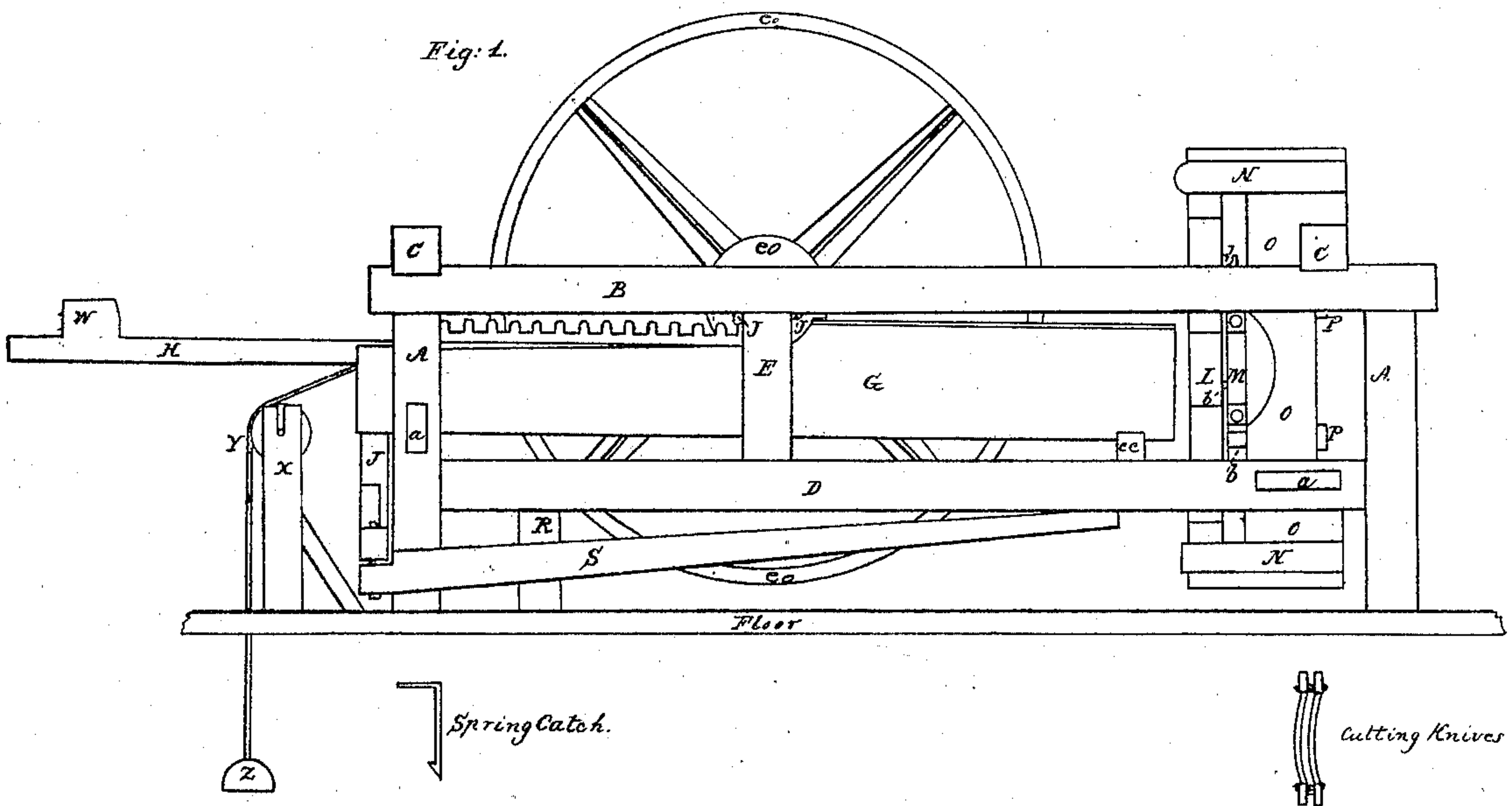


N<sup>o</sup> 2652

*S. Learned.*  
*Stave Mach.*  
*Patented May 30. 1842.*



Scale 1 inch to a foot

Witnesses;  
*John*  
*H. Barnard*

Inventor;  
*Samuel Learned*



# UNITED STATES PATENT OFFICE.

SAMUEL LEARNED, OF RIDGEWAY, NEW YORK.

## MACHINE FOR DRESSING STAVES FOR BARRELS, CASKS, &c.

Specification of Letters Patent No. 2,652, dated May 30, 1842; Antedated November 30, 1841.

*To all whom it may concern:*

Be it known that I, SAMUEL LEARNED, of the town of Ridgeway, in the county of Orleans and State of New York, have invented a new and useful Machine for Dressing Staves for Hogsheads, Barrels, and other Casks, which I call the "Stave-Dressing Machine;" and I do hereby declare that the following is a full and clear description of the same and of the construction and operation thereof, reference being had to the annexed drawings, making part of this specification, and for the better understanding the construction of the said machine and the manner of using it I hereby give a description of one which I have put in operation.

Figure 1 in the drawings is an elevation of one side of the machine; A A, two of the principal posts tenoned into the top plate B three inches from each end, D longitudinal girt tenoned into the two posts A A eighteen inches below the shoulders, which with the top plate B holds the frame together longitudinally.

E is a standard tenoned into the girt D and the top plate B three feet three inches from the front post, to support the shaft of the band wheel, E. There are two such frames placed two feet apart, connected at the front end by the cross girt, *a*, tenoned into the posts above the longitudinal girts D and by one of the cross girts, *c*, which is bolted to the top plate B with screw bolts; and the back end of the two frames are connected by the cross girt, *a*, being tenoned into the longitudinal girts D nine inches from the outside of the posts A and by the cross girt, *c*, bolted on the top plates B directly over the cross girt, *a*. To the two lost mentioned cross girts, *a* and *c*, the head block, O, which holds the knives and springs, is fastened by two strong screw bolts directly in front of the receiving box G; the head block is four feet long, with a piece tenoned into the back of each end in order to give length to the springs N as represented in side view Fig. 1 on the head block directly in front of the receiving box or groove, K. The knives M are fixed which shave or dress the staves; said knives are portions of a circle about one-third larger than the diameter of the casks for which the staves are intended, and are made fast to the head block by the back screws P P, which screws have a square eye to receive

the ends of the knives; there are two small set screws, Q Q, in each eye as shown in Fig. 5 to set the knives in the proper position; there are two screws both which pass through the ends of both knives to prevent them from receding apart, and a small piece of iron is placed between the knives at each end close to the bolts to keep the knives at a proper distance apart; there is a mortise through the head block in the rear of the knives to permit the staves to pass through after they are shaved.

Directly in front of the knives are placed two rollers, L, in an upright position as shown in side view Fig. 1 which receive the staves and guide them to the cutting edge of the knives; said rollers are three feet four inches long with bands around and iron gudgeons in each end, and run in wood or metal boxes; said boxes are four inches long; on the middle of said rollers there is a wide band of iron to prevent the staves from wearing the rollers; said rollers are three inches from the head block; said rollers and boxes are kept from moving up or down by two pieces of boards, fastened to the upper and lower ends of the head block as shown in side view Fig. 1; the rollers and boxes are kept in their proper position transversely by four strong springs of wood or steel bolted to the side of the head block O at the upper and lower ends; these springs press the boxes together and consequently the rollers, so that when the staves is propelled forward between them they recede from each other and accommodate themselves to the thickness of the staves, and keep them in their proper position to be shaved by the knives; between the rollers and the knives are placed two fender boards, *b b*, as shown in side view Fig. 1 to prevent the shavings from winding around the rollers; said boards are fastened to two small pieces of joists and one of said joists is fastened to the top plates B and the other to the longitudinal girts D; said board are about six inches apart in the center with their inside edges made bevel and stand close to the rollers.

G, the receiving box with a groove K, to receive and guide the rough staves and guide the slide, H, and rack, I, is eight feet six inches long; the back end of said box is three inches from the rollers and is made fast to a cross support or roll, *c c*, with gudgeons formed on each end which rests



on the upper side of the longitudinal girts, D; the front end rests on the cross girt, *a*, and on the upright stud which forms part of the lever, T, as the box moves up and down; at the front end it is kept in the proper position by the upright guide, F, and a small guide fastened to the inside of the post, as shown in the end view, Fig. 3, the groove K is five inches deep from the back end to the pinion, and the remainder is three inches deep as represented in side view Fig. 1; in the bottom of said groove there are five friction rollers, as shown in view Fig. 2 to reduce the friction of the slide, H, one of the rollers is under the center of the pinion; said rollers are iron with gudgeons on each end and run in metal boxes. The upper side of the back end of the receiving box is covered with a plate of band iron, *f f*, as shown in view Fig. 2 to prevent wear by the action of the rough staves, also back of the pinion is a plate of band iron, *g*, fixed across said box as shown in view, Fig. 2, to prevent the follower, *h*, from being drawn back under the pinion by the weight, Z, as shown in side view Fig. 1.

Into the upper side of the front end of the receiving box is fixed a strong iron stirrup or staple, V, as shown in the end view Fig. 3, and on the upper girt, C, is fixed a strong steel spring catch, U, as shown in end view Fig. 3 to receive the stirrup or staple, V, so that when the front end of the receiving box is raised the spring latch holds it in that position until it is disengaged by the guard W, which is hereafter described.

H, the slide on which the rack, I, guard, W, and the follower, *h*, is fixed, as represented in view Fig. 1 and Fig. 2 the slide is eight feet six inches long two by three, the rack I is four feet long and is bolted firmly on the upper side of the back end of said slide, there is a plate of band iron four feet long on the under side of the back end of the slide to prevent wear by the friction rollers, on the back end of the slide there is strap of iron two inches wide and one half inch thick and long enough to lap over the under and upper sides of the slide and rack two inches in order to have the screw bolt, *h*, pass through, to firmly bind the strap of iron over the back end of the slide and rack, which forms a follower, *h*, as shown in view Fig. 2 which comes in contact with the staves; and by means of the follower being raised above the rack so that when the rack is disengaged from the pinion and the slide is drawn back by the weight, Z, it comes in contact with the plate of iron, *g*, across the receiving box which stops the follower from being drawn back under the pinion by the weight Z, near the front end of the slide H is fixed the cam piece or guard, W, as shown in side view Fig. 1, so when the rack is thrown into gear with the pinion the slide

is carried forward propelling the stave before it until the guard W, comes in contact with the spring catch, U, which is thereby disengaged from the stirrup or staple V, and the receiving box falls down and disengages the rack from the pinion and the counter weight Z, falling draws the slide back ready to receive another stave, the above mentioned weight Z is attached to the under side of the slide H, by the leather strap Y, which passes over the pulley fixed in the stud, X, as shown in view Fig. 1. The stud X is tenoned into the floor near the front end of the machine so as to fetch the pulley directly under the slide H.

R, stud, to which the foot lever S, is fixed, said stud is tenoned into the under side of the longitudinal girt D, on the front side of the machine about eighteen inches from the front end, S, foot lever eight feet long fixed to the stud R with an iron pin two feet from the front end of said lever; the short end of said lever is connected to the cross lever, T, and the long end is pressed down by the foot of the attendant as shown in side view Fig. 1.

T, cross lever three feet six inches long with a stud and braces tenoned into the upper side to raise the receiving box, the back end of said lever is fastened to the front post A by an iron pin and the other end is fastened to the short end of the lever, S, by a swivel bolt as shown in end view Fig. 3.

E band wheel six feet diameter and one foot wide fastened on the shaft, *d*, said shaft is made of iron three inches square with journals on each end which run in metal boxes fixed in the wheel standard E.

J, pinion eight inches diameter fastened on shaft, *d*, as shown in view Fig. 2.

The operation is as follows: A leather band or belt from any suitable power, giving the band wheel E, about forty revolutions per minute, the attendant puts a stave into the receiving box, or groove K; and presses down the lever S with his foot, thereby raising the receiving box and throwing the rack into gear with the pinion, the stave is thereby propelled forward between the rollers and the knives, until the guard, W, strikes the spring catch, U, which disengages it from the stirrup or staple V, and the receiving box falls, throwing the rack and pinion out of gear, and the counter weight Z, falling, draws back the slide ready to receive another stave.

I am aware that machines have been made for dressing stoves by forcing through between knives by a follower operated by a rack and pinion, and I do not therefore claim this as of my invention; but

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

1. The arrangement for throwing the rack

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out of gear by having the receiving box in which the slide works hung at one end by a joint or roll and the other provided with a stirrup or staple in combination with the spring catch on the frame and the cam piece or guard on the slide in the manner described, and in combination with the above.  
2. I also claim the foot and cross levers

for the purpose of throwing the rack into gear as herein described.

Sept. 15, 1841.

SAMUEL LEARNED.

Witnesses:

CHESTER BROOKS,  
HENRY LEARNED.