

(No Model.)

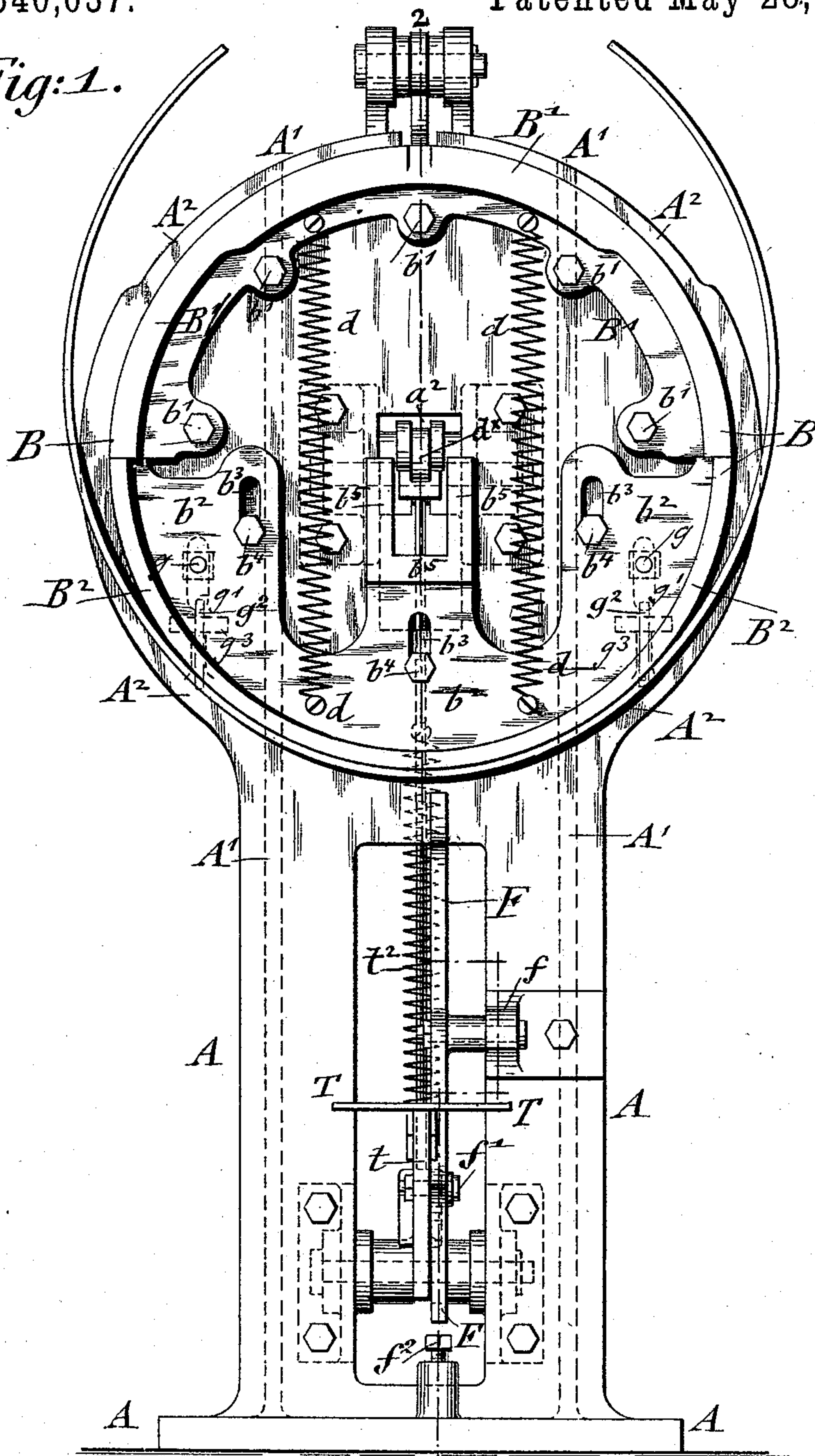
3 Sheets—Sheet 1.

L. WEIDMANN.
SIZING AND NAILING BARREL HOOPS.

No. 540,037.

Patented May 28, 1895.

Fig: 1.



WITNESSES:

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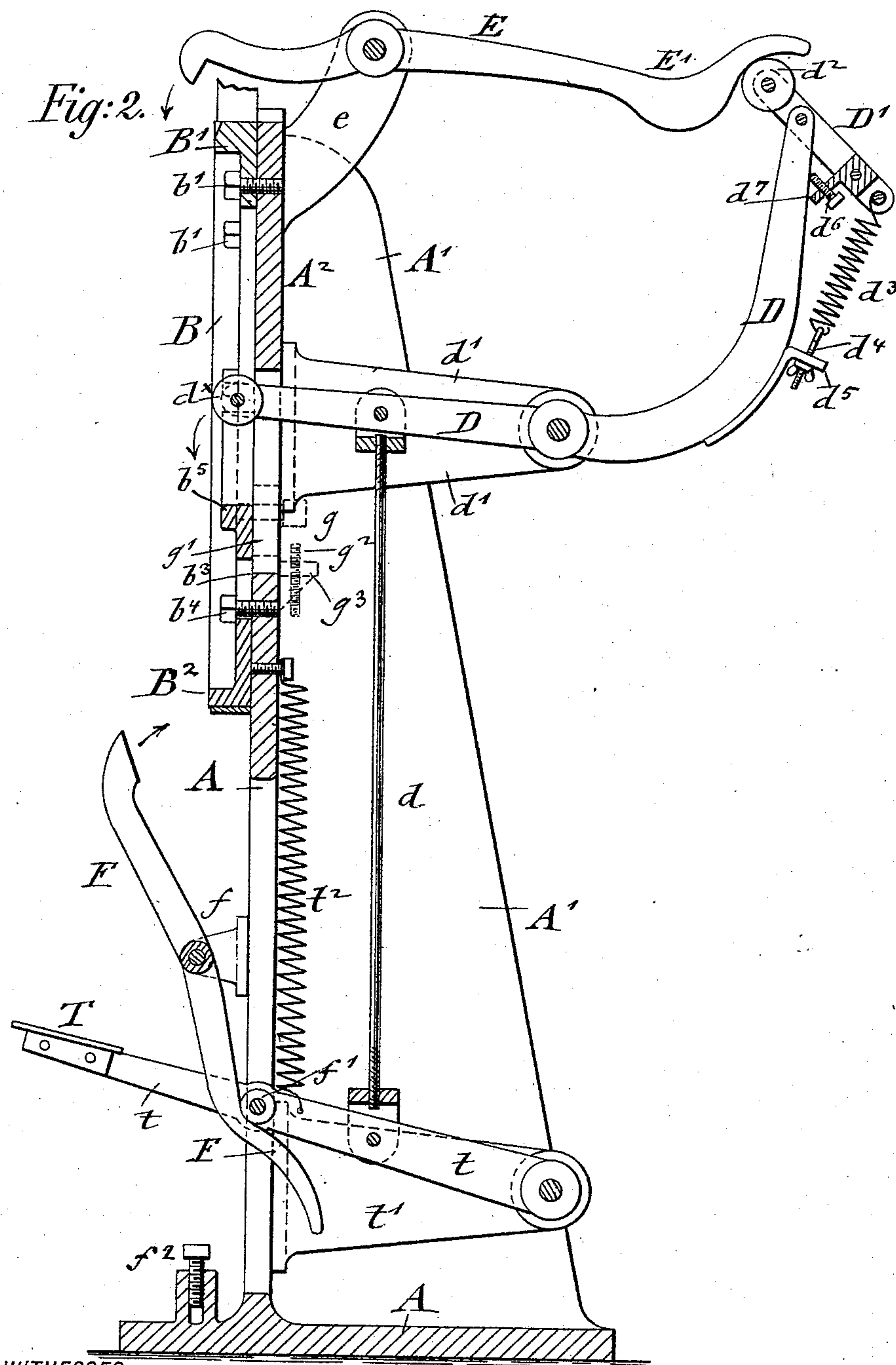
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Patented May 28, 1895.



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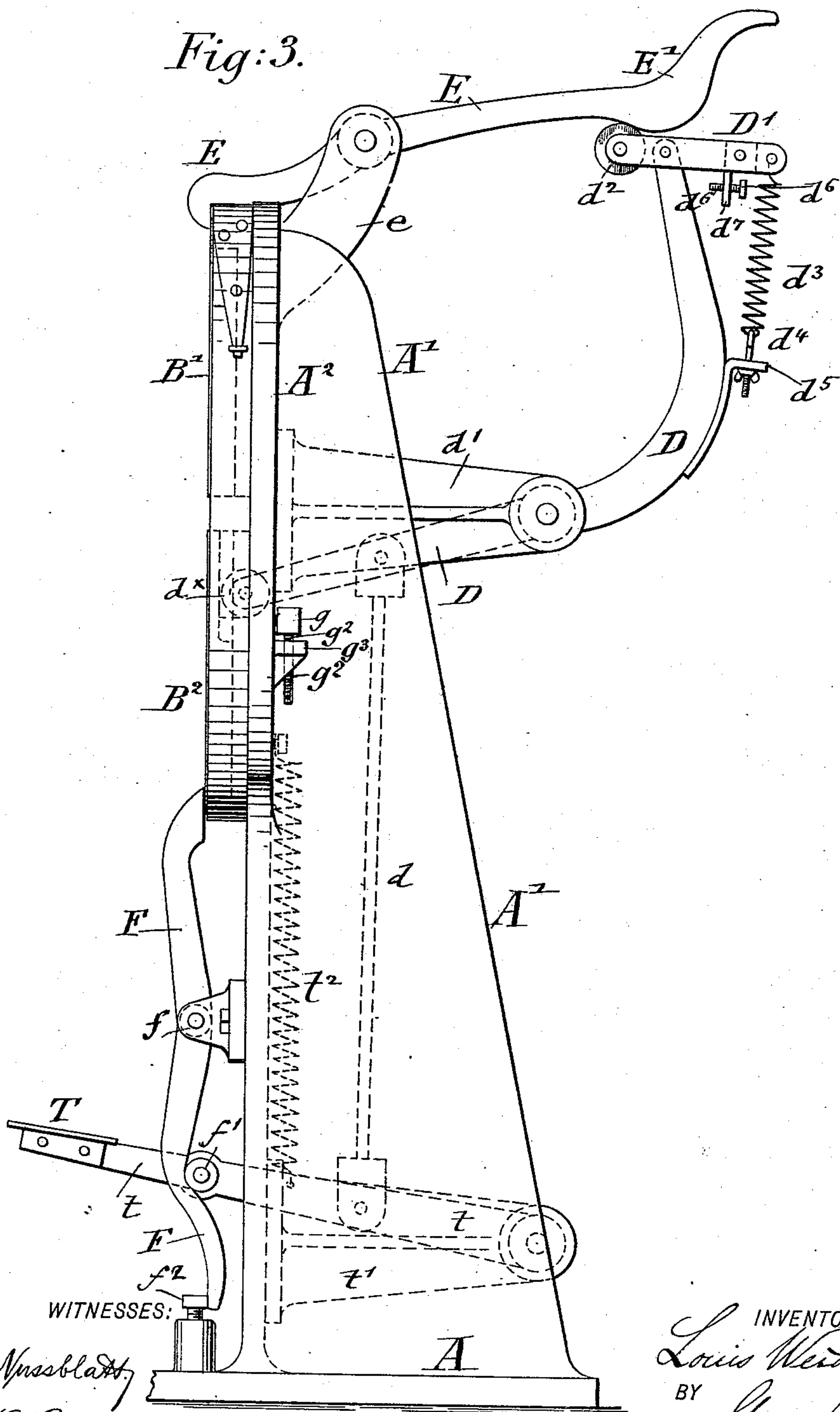
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3 Sheets—Sheet 3.

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Patented May 28, 1895.



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LOUIS WEIDMANN, OF BROOKLYN, NEW YORK.

SIZING AND NAILING BARREL-HOOPS.

SPECIFICATION forming part of Letters Patent No. 540,037, dated May 28, 1895.

Application filed September 13, 1894. Serial No. 522,876. (No model.)

To all whom it may concern:

Be it known that I, LOUIS WEIDMANN, a citizen of the United States, residing in the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Machines for Sizing and Nailing Barrel-Hoops, of which the following is a specification.

This invention has reference to an improved machine for sizing and nailing the hoops required for sugar, flour and other barrels, butter tubs, &c., so as to complete them preparatory to slipping them into position over the staves of the barrels or tubs, the machine facilitating the sizing and nailing of the hoops and permitting the use of unskilled in place of skilled hands for the work; and the invention consists of a machine for sizing and nailing barrel-hoops, which comprises a sectional and extensible gage-cylinder, means for adjusting the cylinder-sections to the proper size, a lever for retaining the overlapping ends of the hoop in position on the gage-cylinder, a second lever for retaining the lower part of the hoop in position on the same, and a fulcrumed lever for operating the lower sliding section of the extensible gage-cylinder until it is arrested by suitable stops, so as to set each hoop to proper size on the gage-cylinder preparatory to connecting the ends by the nails or staples usually employed, as will be fully set forth hereinafter and finally pointed out in the claim.

In the accompanying drawings, Figure 1 represents a front elevation of my improved machine for sizing and nailing barrel-hoops. Fig. 2 is a vertical transverse section of the same on line 2 2, Fig. 1, showing the parts in position before the hoop is placed in locked position on the same; and Fig. 3 is a side elevation of my improved machine, showing the parts in position after the hoop is locked to the gage-cylinder adjusted to the proper size and ready for nailing.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents an upright supporting-frame, which is provided with parallel strengthening-ribs A' at the back of the upright-frame A. The upper part A² of the frame A is made approximately of disk-shape, the upper part of the said disk

carrying the semi-circular stationary section B' of an extensible gage-cylinder B, which section is attached by screws b' to the upper disk-shaped part A² of the supporting-frame A. The lower semi-circular section B' of the gage-cylinder B is provided by a web b², which is guided by slots b³ on stationary headed studs b⁴ of the upper part A², as shown in Figs. 1 and 2. The lower section B² of the gage-cylinder B is connected with the stationary section B' by helical springs b, the ends of which are connected respectively to the web b² of the lower section of the gage-cylinder and to the upper stationary section of the gage-cylinder. An opening a² is arranged in the center of the upper part A² of the supporting-frame A, while the thicker or reinforced U-shaped central portion b⁵ of the web b² of the lower section B² of the gage-cylinder is guided along the sides of the central opening a², as shown in Fig. 1.

The hoop that is to be sized and nailed is placed first against the lower movable section B² of the gage-cylinder B, its upper ends being bent so as to overlap each other on the stationary section B' of the same. As soon as this is accomplished, the treadle T, the lever t of which is pivoted to a backwardly extending bracket t' at the lower part of the supporting-frame A, is depressed by the attendant, said treadle-lever being connected by a helical spring t² with the upper part A² of the frame A, so as to return the treadle into raised position when released by the foot. A connecting-rod d is pivoted to the treadle-lever t and to an intermediate lever D, which is fulcrumed to rearwardly-extending brackets d', of the upper part A², the rear end of said lever being curved in upward direction and provided at its upper end with a fulcrumed arm D' that carries at its upper end an anti-friction roller d². The lower end of the arm D' is adjustably connected by a helical spring d³ and screw-buckle d⁴ with a lug d⁵ attached to the curved lever D. The arm D' is provided with an adjustable stop-screw d⁶ that passes through a lug d⁷ on said arm, so that the latter cannot be moved beyond the position shown in Fig. 2, which is the normal position of the arm D'. The anti-friction-roller d² engages the cam-shaped rear end E' of a retaining-lever E, that is fulcrumed to up-

wardly-extending brackets e of the upper part A^2 of the supporting-frame A , the front end of the retaining-frame being made in the shape of a hook that is adapted to engage and
 5 press the overlapping ends of the hoop on the upper section B^1 of the gage-cylinder, as shown in Fig. 3, when the anti-friction roller d^2 of the pivot-arm D^1 is passed under the cam-shaped rear end E^1 of the fulcrumed lever E , as shown in Fig. 3. A second retain-
 10 ing-lever F is fulcrumed to a lug f attached to the lower front part of the frame A and actuated by an anti-friction roller f' on the treadle-lever t , which roller engages the lower
 15 curved end of the fulcrumed lever F , so that when the treadle is lowered, the upper end of the same is enabled to press on the lower part of the hoop and retain the same in position on the lower section of the gage-cylinder, as
 20 shown in Fig. 3.

The lower end of the fulcrumed retaining-lever F is arrested by the head of a stop-screw f^2 when the upper end of the lever t arrives at the proper position for retaining the hoop.
 25 The front end of the intermediate curved and fulcrumed lever D is also provided with anti-friction roller d^x , which extends into the recess of the U-shaped center portion b^5 of the web b^2 of the movable section B^2 of the gage-
 30 cylinder. When the front end of the lever D arrives at its lowermost position, its anti-friction roller d^x engages the movable section B^2 after the retaining-levers E and F have engaged the hoop and locked the same in posi-
 35 tion on the gage-cylinder. By the action of the front end of the curved lever D on the movable section B^2 of the gage-cylinder, said section is moved in downward direction along its guide-
 40 studs b^4 , so that the hoop is extended to the size to which the sections B^1 B^2 of the gage cylinder are adjusted. The movable section B^2 is provided with stops g which extend through
 45 slots g' in the upper part A^2 to the rear of the latter and which abut against stop-screws g^2 , passing through lugs g^3 at the rear of the
 50 upper part A^2 when the section A^2 is lowered, so as to arrest the downward motion of the same, and set the hoop to the exact size required. The overlapping ends of the hoop
 55 are then ready for being nailed and stapled in the usual manner, after which the treadle is released, so that the hoop can be removed, owing to the return of the movable section B^2 of the gage-cylinder to its initial position
 60 by its spring t' , and the receding motion of the retaining-levers E and F . The lower section of the gage-cylinder can be adjusted within certain limits, so that one and the same machine can be used for setting barrel-hoops
 of different sizes.

For making all sizes of sugar, flour and

other barrels, two or three sizes of machines are sufficient. By the motion of the treadle, and the action of the intermediate actuating mechanism, the motion of the different levers
 65 is so timed that the hook of the retaining-lever E engages the first upper overlapping ends of the hoop and holds the same in position on the stationary section of the gage-cylinder, while the lower retaining-lever F retains next
 70 the lower part of the hoop and holds it until the downward motion of the movable section of the gage-cylinder is completed and the hoop extended to its proper size, said downward motion being accomplished by the downward
 75 motion of the front end of the intermediate lever D , and its engaging of the lower part of the U-shaped center portion b^5 of the movable section B^2 by the anti-friction roller d^x . The lower section B^2 of the gage-cylinder B
 80 is thereby moved into proper position, until its stops g abut against the stop-screws at the rear of the upper part A^2 of the frame A , as before mentioned.

By my improved machine, the sizing and
 85 nailing of barrel-hoops are facilitated and expedited and considerably cheapened, for the reason that the machine can be operated by cheaper labor than the skilled labor heretofore required for doing this kind of work.
 90

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

In a machine for sizing and nailing barrel-hoops, an upright supporting-frame having a
 95 disk-shaped upper part, a gage-cylinder applied to the latter and composed of a stationary upper-section and a shiftable lower-section guided on the disk-shaped upper part of the supporting-frame, a retaining-lever
 100 having a hook-shaped forward end extending beyond the gage-cylinder, said lever being fulcrumed to the upper part of the supporting-frame above the fixed section of the gage-cylinder, a retaining-lever fulcrumed in
 105 front of the supporting-frame, below the shiftable lower-section, the hook-shaped end of said upper lever being adapted to engage the overlapping ends of the hoop, and with the face of the fixed section of the gage-cylinder,
 110 and said lower lever being adapted to engage the middle-portion of the hoop, and means for actuating said levers, substantially as set forth.

In testimony that I claim the foregoing as
 115 my invention I have signed my name in presence of two subscribing witnesses.

LOUIS WEIDMANN.

Witnesses:

PAUL GOEPEL,
 K. R. BRENNAN.