(No Model.)

# F. M. HACKETT.

## MACHINE FOR PRESSING AND BINDING STRAW.

No. 477,538. Patented June 21, 1892.

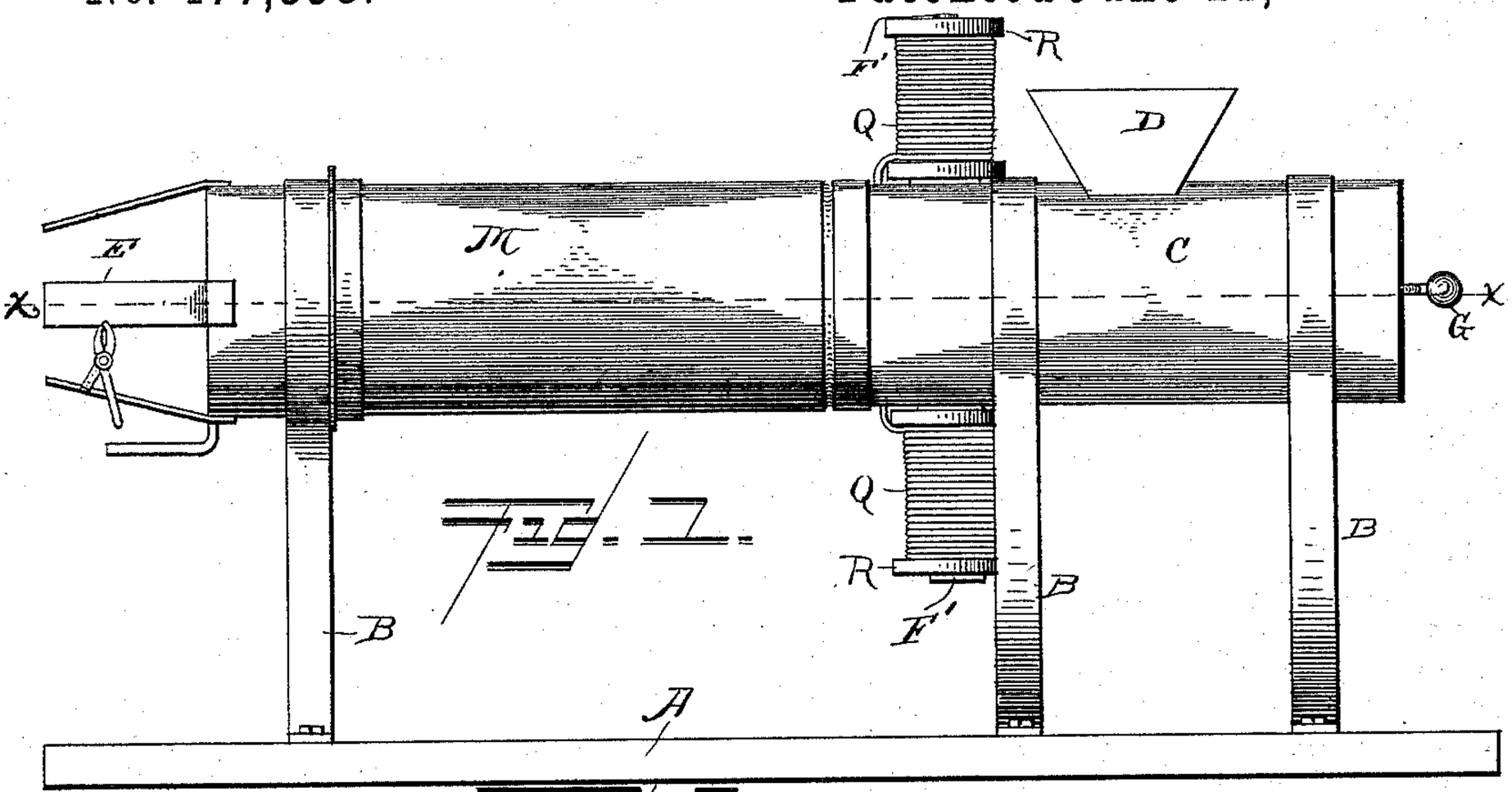


FIG. 1.

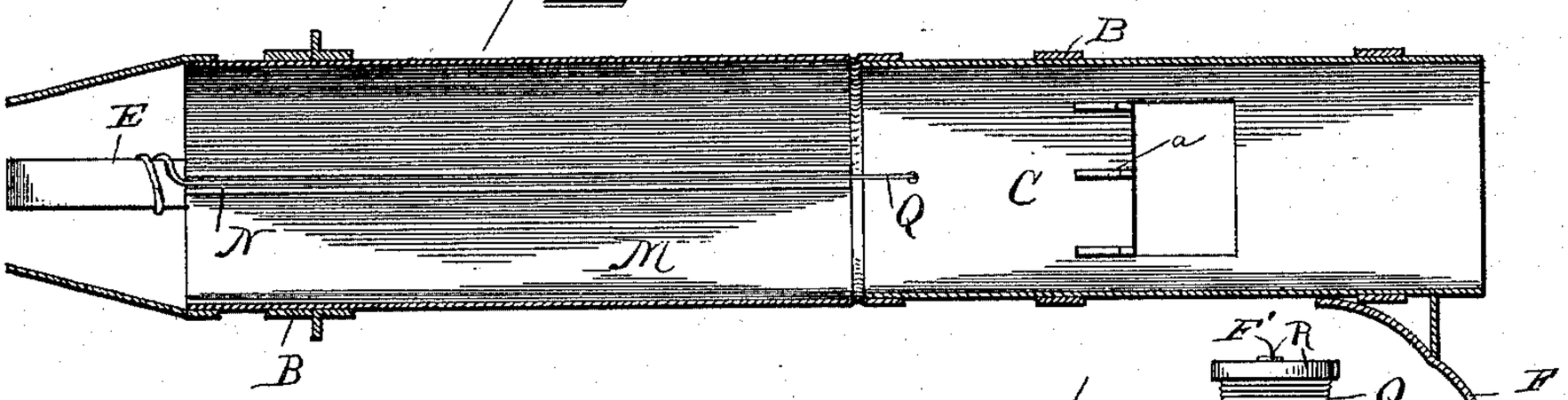


FIG. 2.

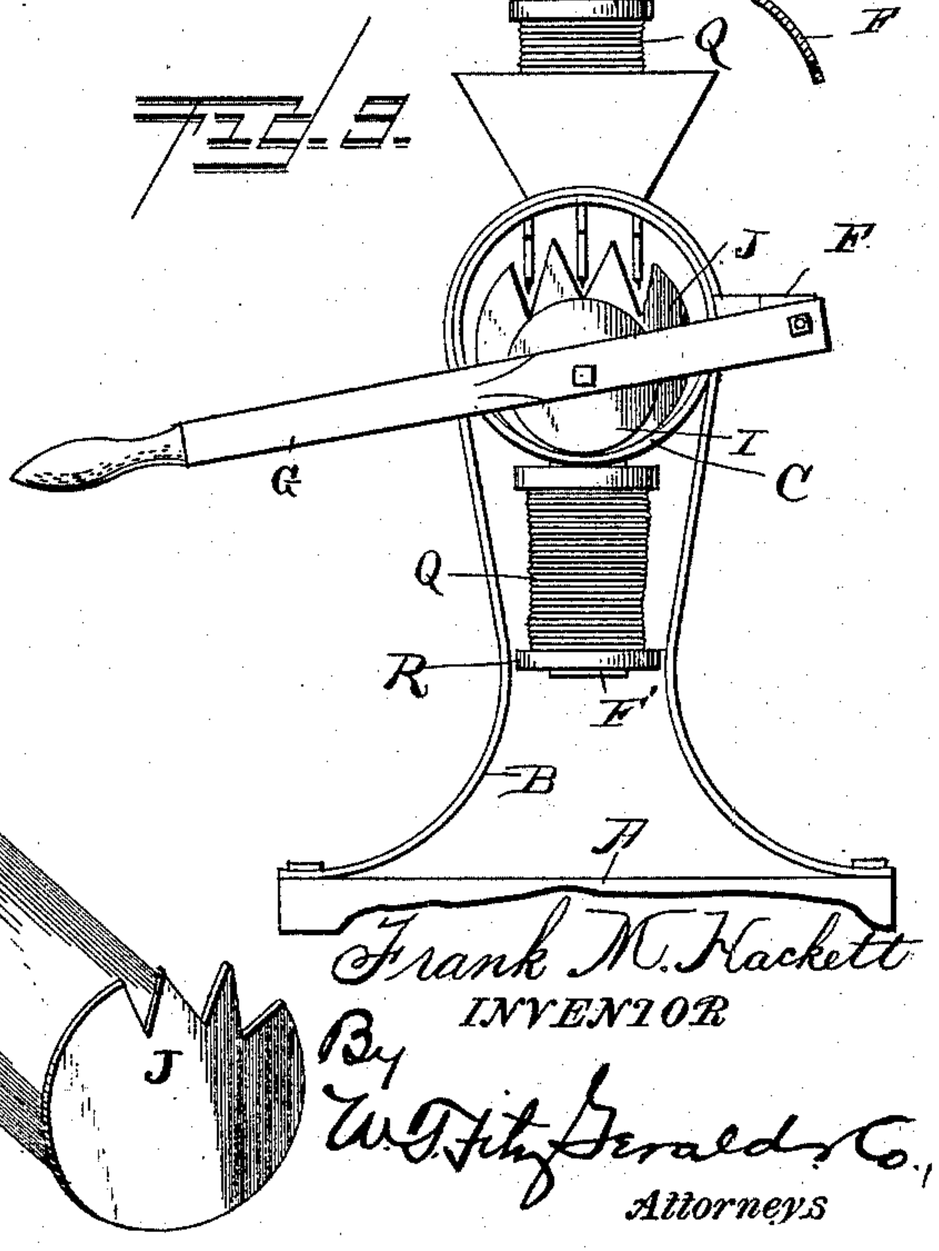


FIG. 3.

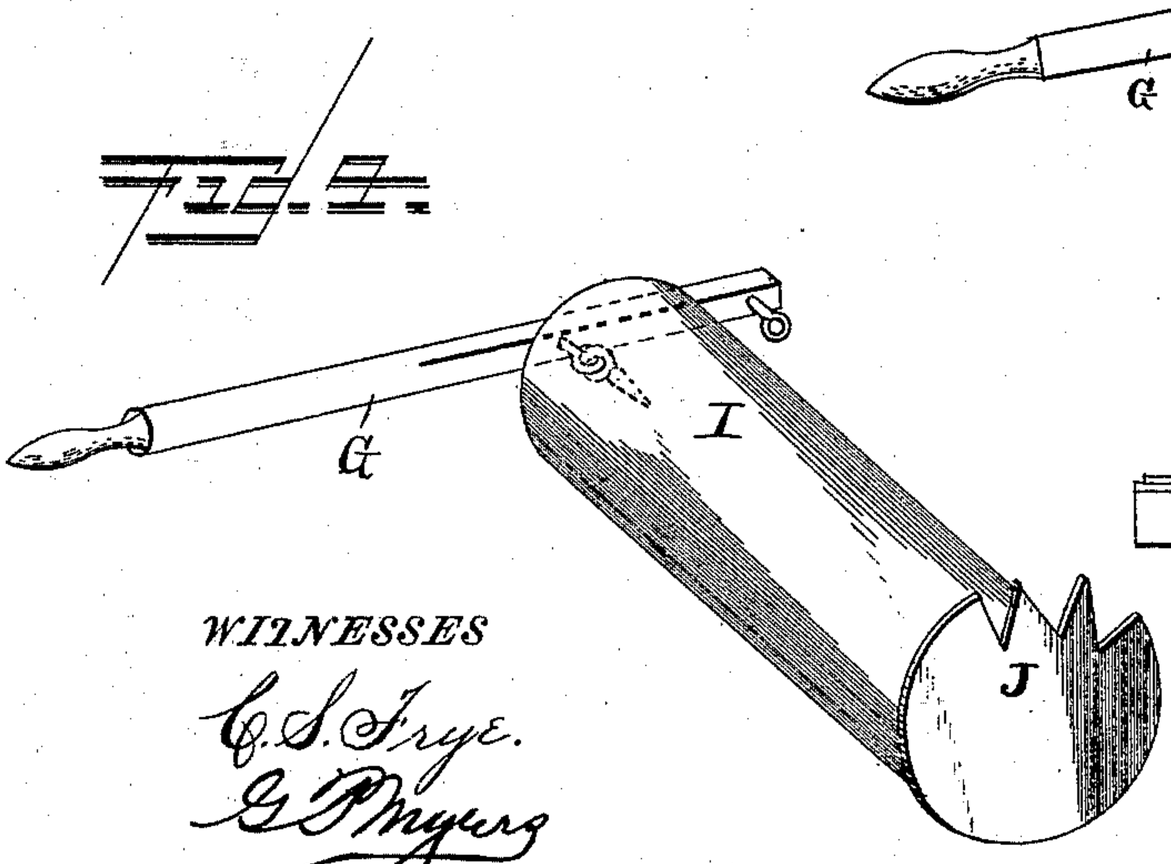


FIG. 4.

WITNESSES

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# UNITED STATES PATENT OFFICE.

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## MACHINE FOR PRESSING AND BINDING STRAW.

SPECIFICATION forming part of Letters Patent No. 477,538, dated June 21, 1892.

Application filed February 13, 1892. Serial No. 421,411. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK M. HACKETT, a citizen of the United States, residing at Luverne, in the county of Rock and State of Minnesota, have invented certain new and useful Improvements in Machines for Pressing and Binding Straw; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to an improved machine for pressing straw and the like into blocks and binding the same in a shape suitable for fuel; and it consists in the peculiar construction, certain novel combinations, and the adaptation of parts hereinafter described, and particularly pointed out in the claims appended.

In the accompanying drawings, Figure 1 is a side elevation of my improved machine. Fig. 2 is a longitudinal sectional view of the fixed packing-casing and the revoluble binding-casing, taken in the plane indicated by the line *x x* on Fig. 1. Fig. 3 is a rear end elevation of the machine; and Fig. 4 is a perspective view of the packing-follower and its actuating-lever removed.

In the said drawings similar letters designate corresponding parts throughout the several views, referring to which—

A indicates the base of my improved machine, from which rise the standards B, which are preferably of the proportional length illustrated.

Fixedly mounted upon the forward standards B is the fixed packing-casing C, which is preferably of a cylindrical form, as illustrated, and is provided upon its upper side with a feed-hopper D, through which the straw to be pressed is fed.

Suitably journaled upon the rear end of the packing-casing C and in the upper portion of the rear standard B is the revoluble binding-casing M, which is provided at its rear ends with spring-arms E, of sufficient strength to hold the straw within the casing while the same is being pressed and bound.

Pivotally connected to an arm F, extending laterally from the fixed casing C adjacent to the forward end thereof, is one end of a lever G, which is preferably of the proportional length shown and is connected directly to said casing C by a spring H, which serves to hold said lever in its proper position with respect to the casing.

Fixedly connected in a suitable manner to the lever G at an intermediate point in the length thereof is the pressure-follower I, which is provided at its forward end with a disk J, of a diameter corresponding to the interior diameter of the casing, and is designed to press the straw or other stock fed through the hopper D, through the casing C, and into the binding-casing M. The upper edge of the periphery is notched, as shown at J, thus forming prongs, which serve to take a firm hold of the straw and carry it forward, while upon the interior of the casing M are provided a series of depending strips *a*, between which and the prongs the straw is carried.

Connected to or formed integral with the inner side wall of the casing M at diametrically-opposite points are two guide-ribs N, which taper in width from their rear to their forward ends and are designed in practice to seat two wires for binding the straw or other stock into blocks, and are also designed to cause the straw or other stock to rotate with the casing M. By reason of the guide-ribs N being tapered in width from their rear to their forward ends, it will be readily perceived that they will offer little or no obstruction to the entrance of the stock into the casing M. The spring-arms E, connected to the rear end of the casing M, as before described, extend rearwardly and inwardly from said casing, and they serve, in addition to holding the straw or other stock within the casing, to hold stationary shears, through the medium of which the binding-wires are severed after the formation and discharge of a bundle.

Extending above and below the casing C, at a point adjacent to the inner rear end thereof, are shafts F′, upon which are loosely mounted the spools R, carrying the binding-wires Q, as better shown in Fig. 1 of the drawings. These binding-wires Q, which take through apertures formed at diametrically-opposite points in the casing C, are seated in the guide-ribs N, and at the beginning of the operation the connected ends of the said wires are looped over one or two of the spring-arms E, for a purpose presently described.

In the operation the straw or other fuel to be pressed into blocks is fed through the hopper D, and the pressure-follower I is actuated through the medium of the lever G to press the straw through the fixed casing C into the revoluble casing M. Said casing is revolved by a crank, as illustrated, or other suitable means, when the binding-wires will be wound tightly around the bundle of straw. After the first bundle of stock has been bound the continuous feeding and packing of the loose stock forces the first bundle through the spring-arms E and discharges the same from the casing. After a bundle is discharged, as stated, the wires are cut through the medium of the shears described, and the casing M is ready to bind another bundle.

Although I have specifically described the construction and relative arrangement of the several elements of my improved machine, yet I do not desire to be confined to the same, as such changes or modifications may be made as fairly fall within the scope of my invention.

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

1. In a machine for pressing and binding straw and the like, the combination, with the fixed casing, the pressure-follower playing in the said casing, and a suitable means for actuating said follower, of the revoluble binding-casing, the spring-arms connected to the rear end of said casing and extending rearwardly and inwardly therefrom, the binding-wires seated in guides in said casing, and a suitable means for revolving the casing, substantially as and for the purpose specified.

2. In a machine for pressing and binding straw and the like, the combination, with a fixed casing, a pressure-follower playing in said casing, and suitable means for actuating said follower, of a revoluble binding-casing, spring-arms connected to the rear end of said casing and extending rearwardly therefrom, binding-wires seated in guides in said casing, shears for cutting such wires, and means for revolving the casing, substantially as and for the purpose set forth.

3. In a machine for pressing and binding straw and the like, the combination, with a fixed casing provided in its interior with depending strips *a*, a pressure-follower playing within said casing, said follower carrying a notched disk, and suitable means for actuating said follower, of a revoluble binding-casing, spring-arms connected to the rear end of said casing and extending rearwardly therefrom, binding-wires seated in guides in said casing, and means for revolving the casing, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK M. HACKETT.

Witnesses:

GEORGE LEET,

EDWARD W. LYNCH.