M. FITZGIBBONS.

Improvement in Machines for Pasting Paper upon Straw Boards, &c.

No. 116,173. Patented June 20, 1871.

Fig. 1.

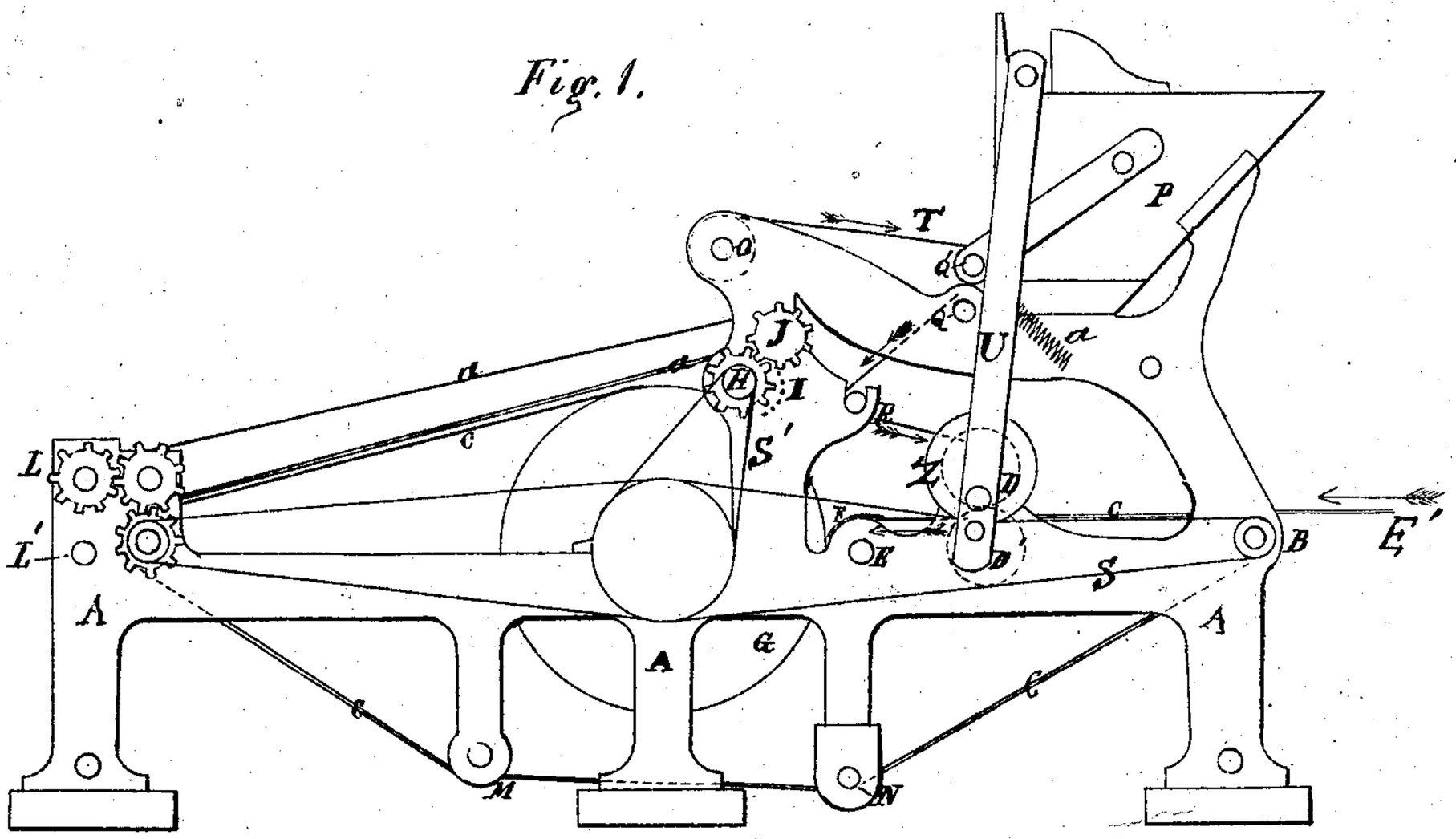
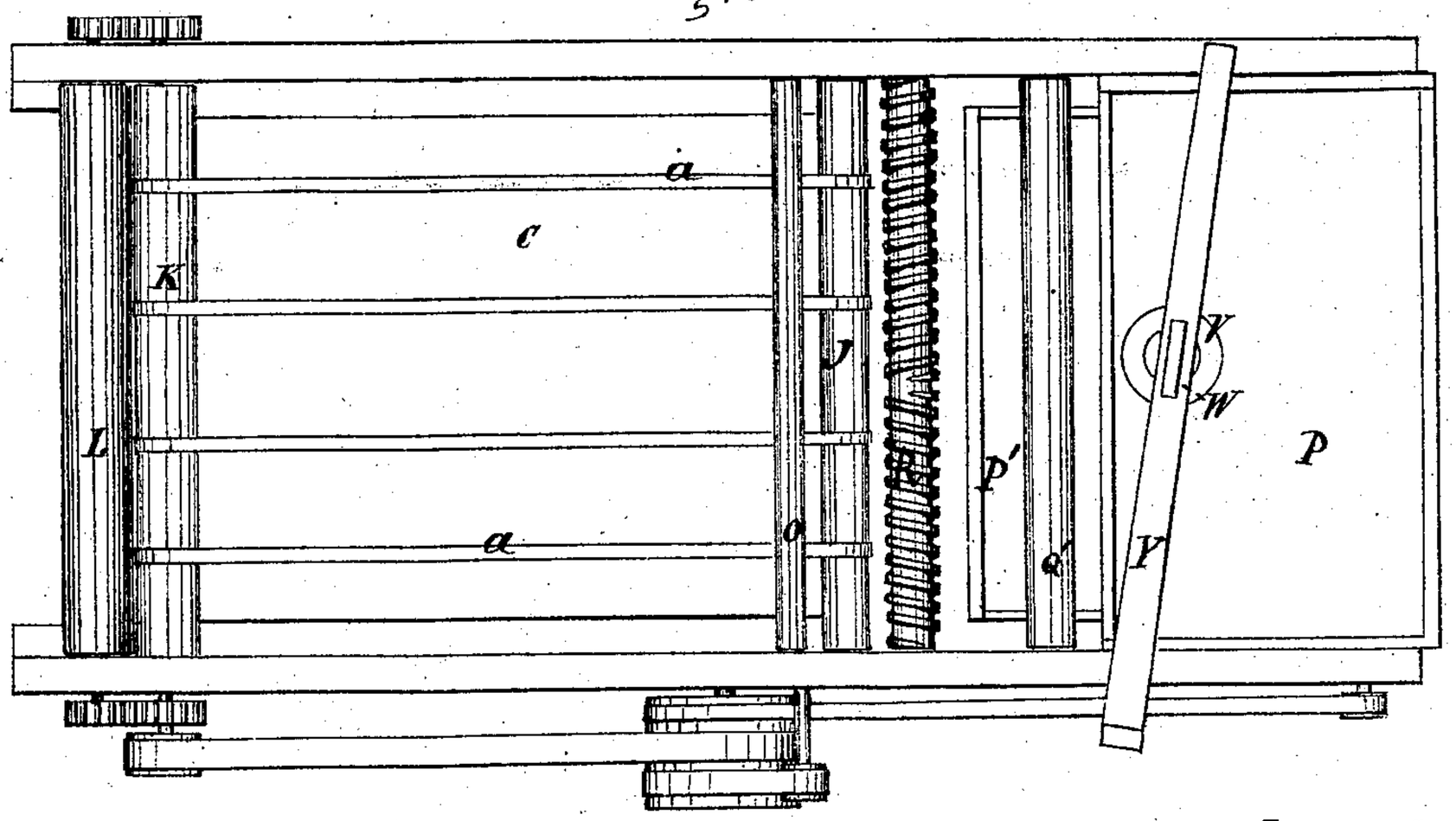


Fig. 3.



Witnesses

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MAURICE FITZGIBBONS, OF NEW YORK, N. Y.

IMPROVEMENT IN MACHINES FOR PASTING PAPER UPON STRAW BOARD, &c.

Specification forming part of Letters Patent No. 116,173, dated June 20, 1871.

To all whom it may concern:

Be it known that I, MAURICE FITZGIBBONS, of the city, county, and State of New York, have invented certain new and useful Improvements in Machines for Pasting Paper upon Straw Board and for other similar purposes; and the following is a full description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

In the accompanying drawing, Figure 1 is a side view of my pasting-machine. Fig. 2 is a top view of the same.

My invention consists of a peculiar novel arrangement of rollers in connection with an endless apron and a hollow drying-cylinder for pasting paper upon the straw board.

The frame A may be made of either wood or metal, and of any suitable form. The endless apron C runs upon a series of rollers, as seen in Fig. 2, and the roller B should be made adjustable to tighten the apron at pleasure. Upon the upper part of the frame is placed a roller, O, which carries the endless roll of paper to be pasted upon the straw board. The paper passes from this roller between rollers Q and Q′, the latter of which is held by the coiled spring *a*, as seen in Fig. 1, where T represents the edge of the paper, and shows the direction in which the paper enters the pasting-rollers and then passes to the drying-cylinder G.

The paste is supplied to the roller Q′ faster or slower, according to the speed of the machine, in the following manner: The paste, properly prepared, is put into the reservoir P, in the bottom of which is a valve, V, which is worked by the piston-rod or valve-rod W, the lever Y, and connecting-rod U, which latter is attached to a crank-pin on the eccentric Z. By means of this valve thus operated the paste is fed slowly down to the smaller reservoir P′, so as to keep a constant supply and yet not overflow. The lower roller Q runs in this lower cistern with its under side dipping in the paste, and as the paper passes between the rollers Q and Q′ it is well coated with paste. The paper in passing from the pasting-roller Q bears upon the removable roller R, which has a right-and-left-hand screw, and revolves so as to spread the paper by means of these screws, which run from the middle toward the edges of the paper.

Thus pasted and spread the paper passes to meet the straw board (seen at E′) upon the endless apron C, and then to the drying-cylinder G, a shield, F, being set to direct the paper and straw board between the cylinder and apron. This cylinder G is made very large, and heated by steam or other means, and the paper and straw board travel nearly around the cylinder before leaving it, and thus are well dried. An adjustable knife, I, shown in dotted lines below the roller H, is set edgewise against the cylinder G to take off the coated straw board and direct it under the belts *a a* or between them and the apron C, and thus go to be delivered from the machine between the rollers L and L′, one of which should have stationary and the other adjustable bearings, the latter being provided with a set-screw in the usual manner to give the desired pressure or calendering. In like manner the rollers D and D′ have one stationary and the other adjustable bearings, so as to give a flexible cushion to press the thin paper into the uneven surface of the straw board. The roller J is made with grooves to keep the belts *a* in place. The roller N has bearings, which are set on a central swivel to work automatically and keep the apron running on the center of the rollers, or to prevent the apron from running side to side.

The roller Q should be made of non-corrosive material and covered with cloth or felt to feed up the paste to the paper, as above mentioned; and the upper roller Q′ should have adjustable bearings.

A coiled spring gives the roller Q′ an elastic pressure upon the paper.

Motion may be communicated to the machine by a pulley upon the shaft of the cylinder G, and the bands S and S′, in connection with the cog-wheels or pinions seen in the drawings, Figs. 1 and 2.

Having described my invention, I claim—

1. The combination of the rollers Q and Q′ with the coiled spring *a* and the reservoir P′, substantially as set forth.

2. The combination of the reservoir P′, the

valve V, rod W, lever Y, connecting-rod U, and the crank-pin on eccentric Z, substantially as set forth.

3. The roller O, in combination with the rollers Q and Q′ and the screw-roller R, substantially as set forth.

4. The drying-roller G with the rollers E and H, the shield F, apron C, and knife I, substantially as described.

In testimony whereof I have hereunto set my name in presence of two subscribing witnesses.

MAURICE FITZGIBBONS.

Witnesses:
EDWARD W. ONEILL,
FRANCIS I. HOLLENWEGER.