

P. H. WAIT.  
SELF ACTING FELT GUIDE.

No. 14,621.

Patented Apr. 8, 1856.

Fig. 1.

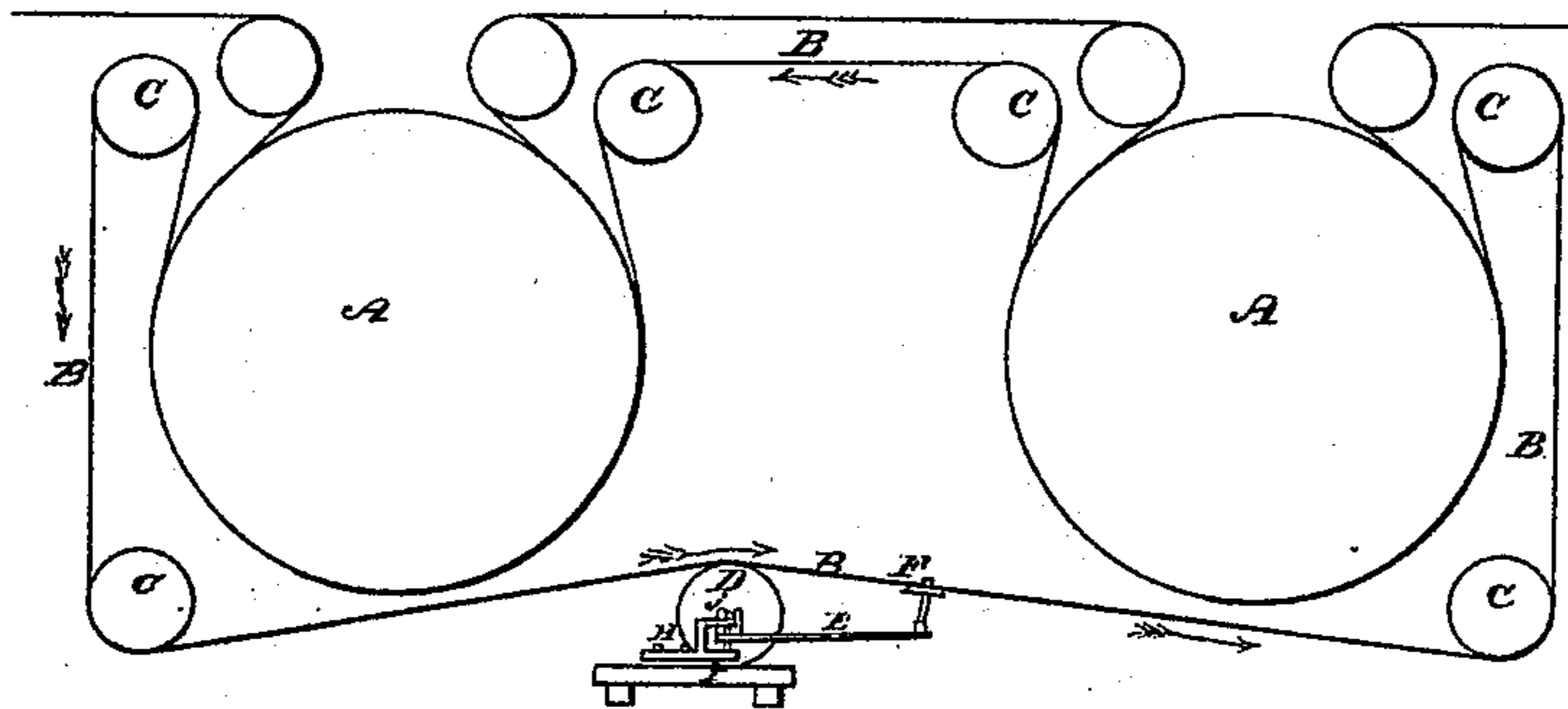


Fig. 2.

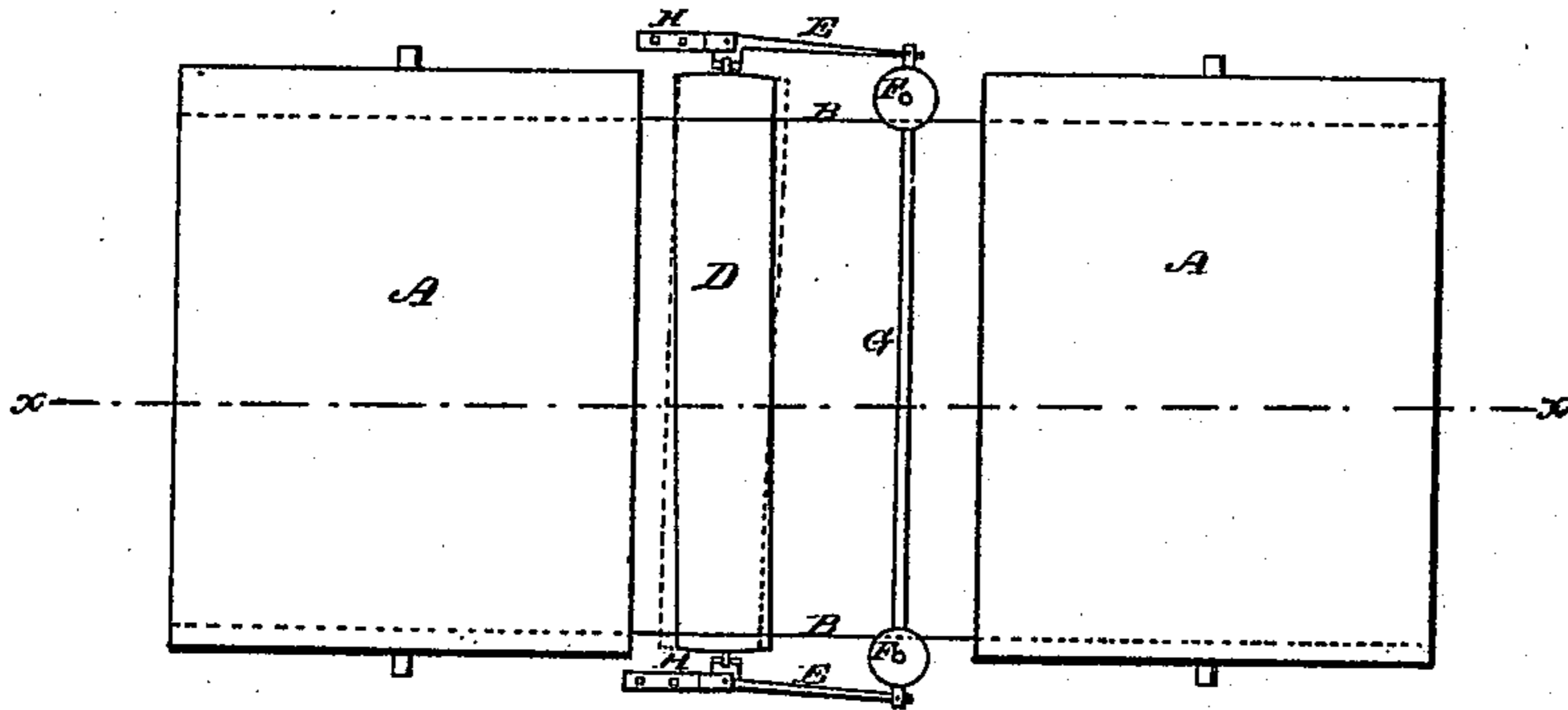


Fig. 3.

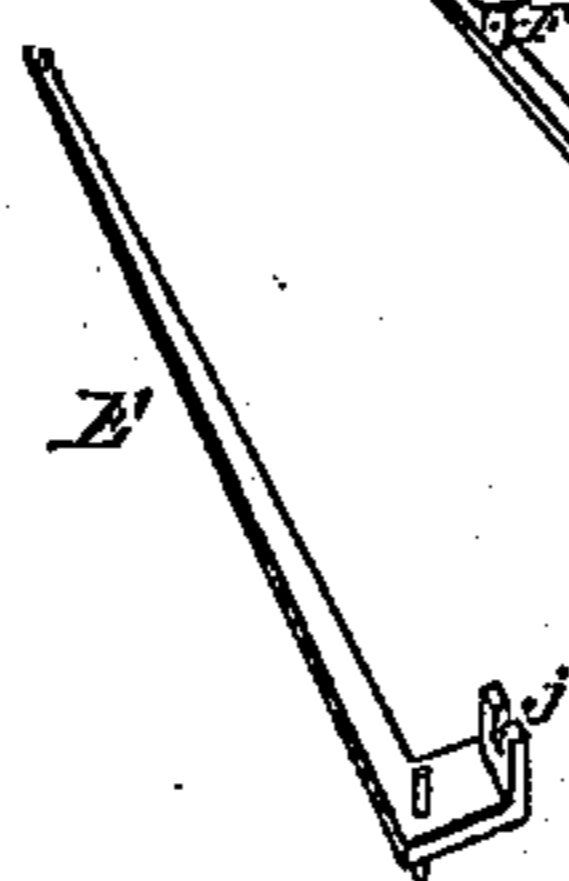


Fig. 5.

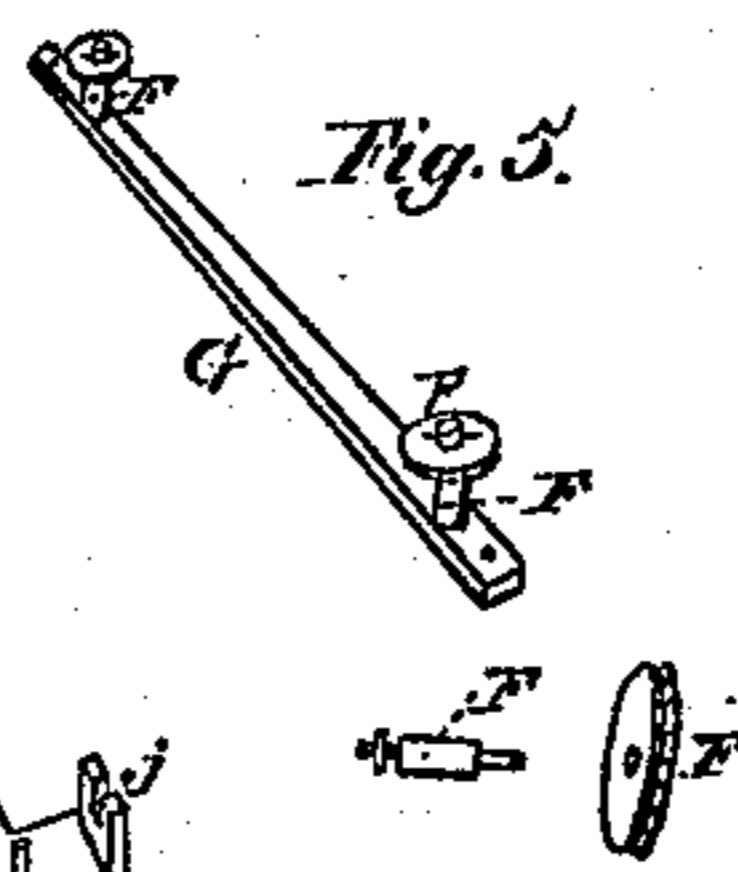
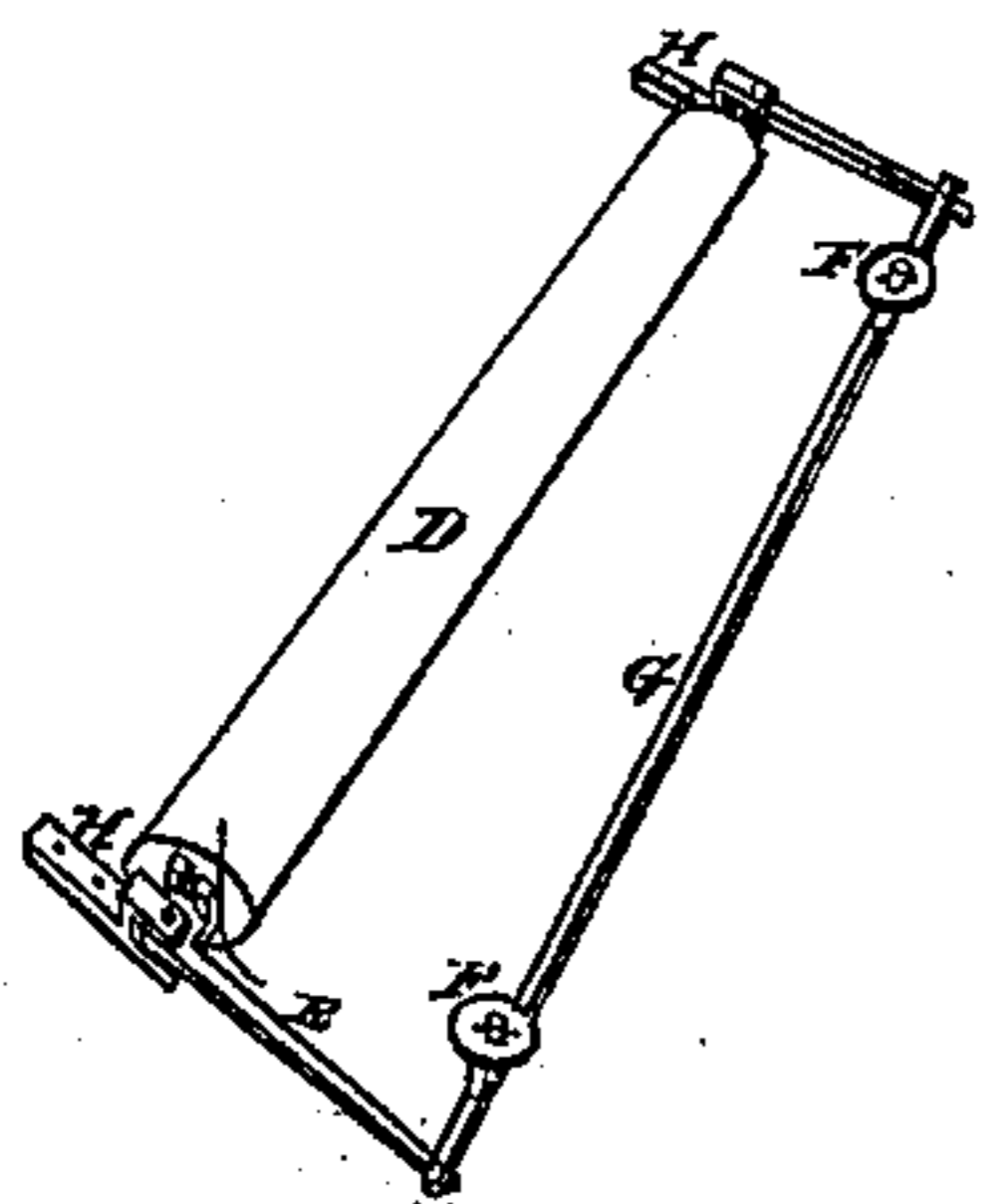


Fig. 4.



# UNITED STATES PATENT OFFICE.

P. H. WAIT, OF SANDY HILL, NEW YORK.

## FELT-GUIDE FOR PAPER-MACHINES.

Specification of Letters Patent No. 14,621, dated April 8, 1856.

*To all whom it may concern:*

Be it known that I, P. H. WAIT, of Sandy Hill, in the county of Washington, State of New York, have invented a new and useful

5 Improvement on Machines for Regulating or Guiding the Felt Cloth Used on the Machinery for the Manufacture of Paper, called a "Self-acting felt-guide;" and I do hereby declare that the following is a full,  
10 clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a longitudinal vertical section  
15 of a paper machine with the improvement attached, Fig. 2 *xx* showing plane of section; Fig. 2 is a longitudinal horizontal section through center of cylinders and guide roll showing plan of improvement. Fig. 3 is a  
20 perspective view of the crooked levers detached. Fig. 4 is a perspective view of socket. Fig. 5 is a perspective view of connecting rod.

Similar letters of reference indicate corresponding parts in the several figures.

The nature of my invention consists in the employment or use of two crooked levers hung upon pivots placed in suitable bearings or sockets. These levers are attached to each  
30 other by a connecting rod so that their movements will be uniform. At or near the other end and at right angles to the main part of the levers is a slotted bearing to receive the journals of a guiding roll upon  
35 which the felt bears. The connecting rod has two pins or rollers placed upon it perpendicularly against which the edge of the felt cloth bears as it inclines to either side of the machine which carries the connecting  
40 rod and causing the levers to turn on their pivots bringing one end of the guide roll forward and carrying the other backward thus causing the felt to move back to its proper line in the center of the machine.

45 To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A represents the cylinders of a paper making machine; B, the felt cloth.

50 *cc* are a series of small rollers over which the felt B passes from one cylinder to the other.

D is the guide roll over which the felt passes in its backward course. The position  
55 of this roll gives the direction of the felt.

E E are crooked levers secured by pivots, to sockets H H. At one end of these levers

is a slot bearing to receive the journals or pivots of the guide roll D. The other ends are coupled together by the connecting  
60 rod G.

F F are pins or pinion rollers placed vertically upon the connecting rod G.

I Fig. 1 is a platform upon which the socket is placed.

65 Operation: The levers E E are made of iron or any other suitable material and secured in the sockets H H, which are also made of iron or of strong material and placed on each side of the paper machine  
70 the journals or pivots of the guide roller D entered into bearings *jj* of levers E E, the connecting rod G being attached to the other end of said levers by hinge joints or pins *kk*, the pins F F being adjusted so as to allow the felt to pass freely between them.  
75 Motion is given to the cylinders by gearing, belt, &c. The felt B, moves around them and the rolls in the direction indicated by arrows Fig. 1. In its backward course it is  
80 made to bear upon the roller D, then passing between the pins F F (see Fig. 2,) as the felt deviates from its course in the center of the cylinders to either side of machine its edges bear against the pins F F causing the  
85 connecting rod G to move and carry the levers E E, displacing the roll D as shown by dotted lines Fig. 2 which works it back to its proper position. By this improvement the regulator or guide becomes self-acting and  
90 relieves the machine tender from a constant care and watchfulness, of which he is forced to keep in order to prevent the felt from being torn in pieces by the gearing and saving  
95 much unnecessary wear of the felt by keeping it in a straight line in the center of the machine.

I do not claim the roll D nor the use of a roll to guide the felt, for this has been previously used in various ways but  
100

What I do claim as new and desire to secure by Letters Patent is.

The employment and use of two crooked levers E E hung upon pivots L L and operated by connecting rod G and guide pins or  
105 friction rollers F F against which the felt bears working the rod G and levers E E changing the position of the roll D by action of the felt substantially as here shown for the purpose set forth.

P. H. WAIT.

Witnesses:

D. MATHEWSON,  
SAMUEL B. WAIT.