(No Model.)

N. E. ACKLEY.

MECHANISM FOR OPERATING THE DEKLES OF PAPER MACHINES.

No. 424,159. Patented Mar. 25, 1890.

Fig. 1.

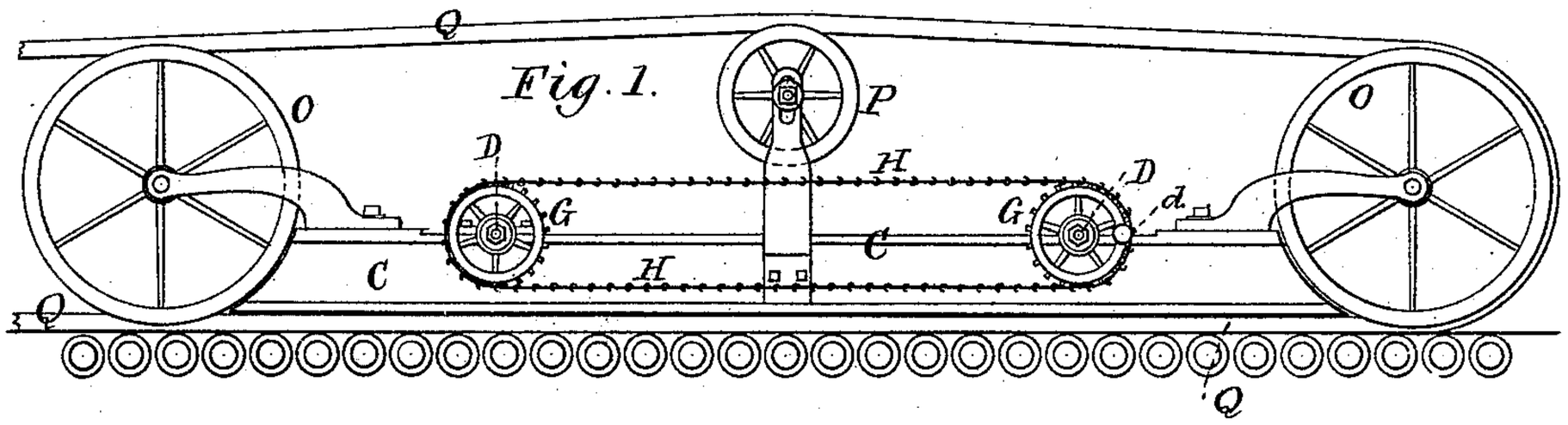


Fig. 2.

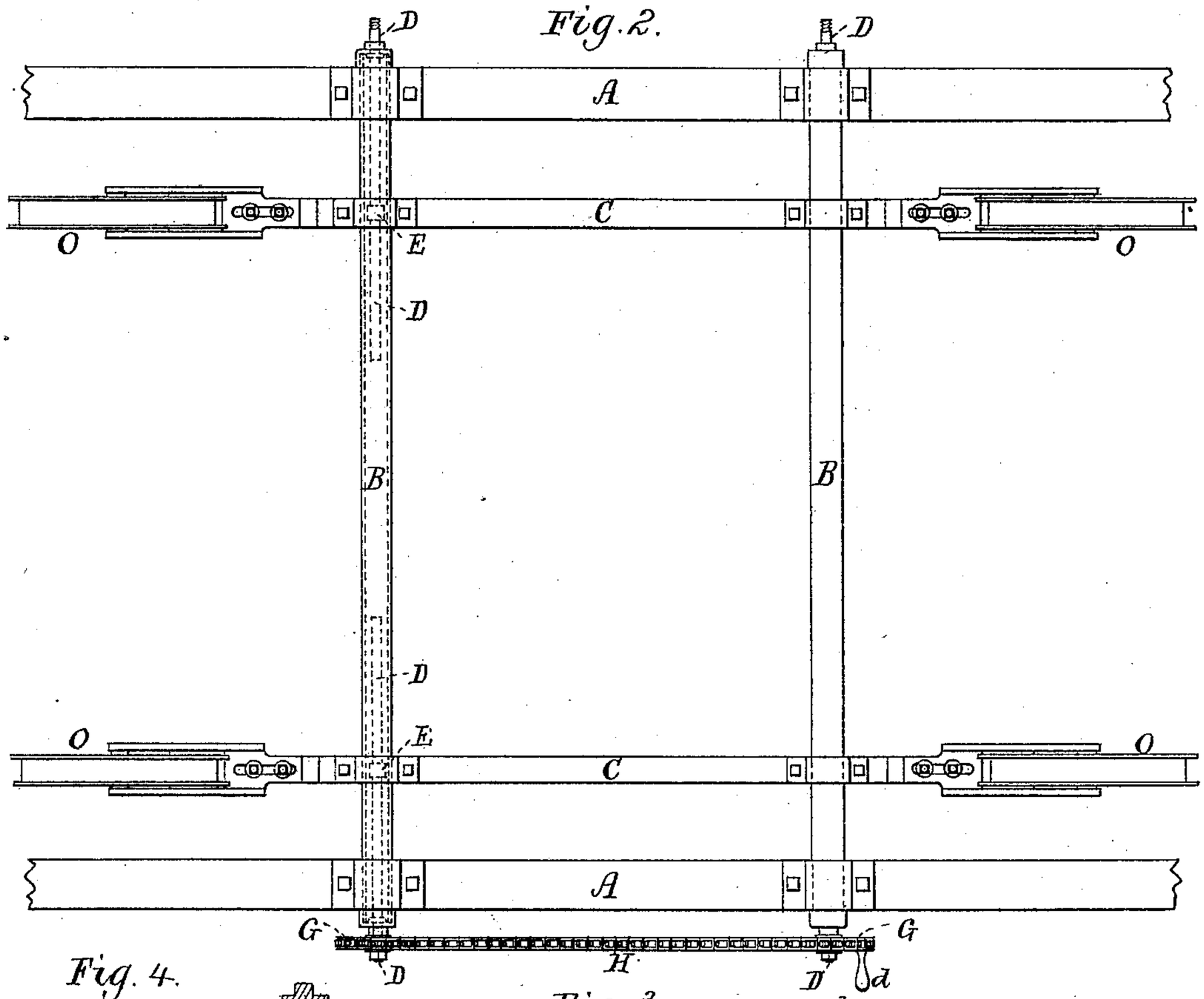


Fig. 4.

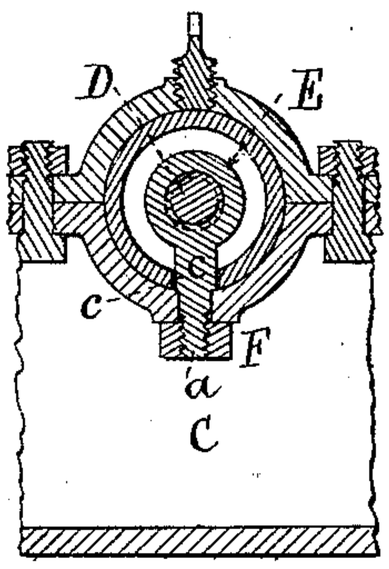
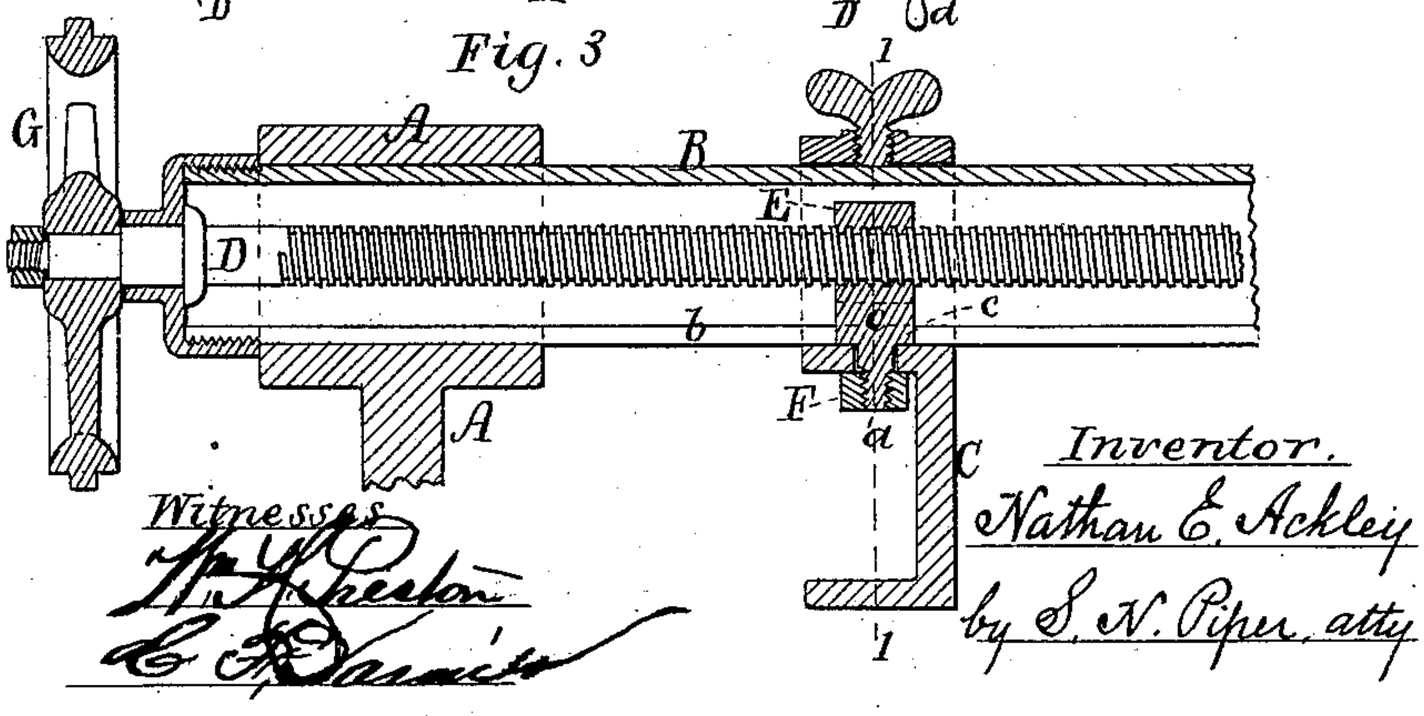


Fig. 3



Witnesses

Inventor.

Nathan E. Ackley

by S. N. Piper, atty

UNITED STATES PATENT OFFICE.

NATHAN E. ACKLEY, OF FITCHBURG, MASSACHUSETTS.

MECHANISM FOR OPERATING THE DEKLES OF PAPER-MACHINES.

SPECIFICATION forming part of Letters Patent No. 424,159, dated March 25, 1890.

Application filed July 31, 1889. Serial No. 319,291. (No model.)

To all whom it may concern:

Be it known that I, NATHAN E. ACKLEY, a citizen of the United States, residing at Fitchburg, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Mechanisms for Operating the Dekles of Paper-Machines; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 is a side view of what is termed the "dekle" of a Fourdrinier paper-machine, also showing in end view the tube-rolls on which the wire-cloth runs. Fig. 2 is a top view of the side rails of said paper-machine and the tubular rails extending from one to the other of them, showing the dekle-rails arranged on the latter, the mechanism for operating the said dekle-rails being represented in both the above figures. Fig. 3 is a longitudinal section of a portion of one of the tubular rails on which the dekle-rails slide, showing one of the latter in cross-section on enlarged scale. Fig. 4 is a transverse section on line 1 1 of Fig. 3.

The object of my improvement is to provide a mechanism by which the dekle-rails can be freely, quickly, and accurately moved on their supporting-rails to adjust the dekle-straps to the required distance apart on the wire-cloth to gage the width of the paper formed thereupon, the nature of my improvement being defined in the claim hereinafter presented.

In the drawings, A A denote the side rails of the frame of a paper-machine, and B B the tubular rails extending from one to the other of said side rails and secured to them as shown. C C are the dekle-rails, supported on said tubular rails and adapted to be moved thereon by screw-shafts D, arranged within the tubular rails B and working in nuts E, also within the tubular rails and secured to the dekle-rails by nuts F, screwed on the shank *a* of the said nuts E and against the said dekle-rails, as shown. Each dekle-rail is provided with grooved wheels O O and P, which support the dekle-bands Q in the usual manner. The rails B are slotted on their under side at *b* from each end toward the middle for a proper distance to receive the lower portion *c* of the body of said nuts E, formed to enter and also to move in said slots when the screw-shafts are revolved. To the outer ends of each of the said screw-shafts D is fixed a sprocket-wheel G, one of which on each side of the machine is provided with a handle *d*, and the said wheels G on each side of the machine are to be connected by a chain belt H, as shown in Fig. 2; but said wheels and belt are shown as only on one side of the machine in said figure.

In cases where it is desired to operate both dekle-rails simultaneously and from one side only of the machine, the screw-shafts D in each tubular rail B are coupled so as to revolve together, or are made in one entire piece and extended through both the nuts E in a rail B and provided with a right-threaded screw to work in one nut and a left-threaded screw to work in the other nut. In such case but two sprocket-wheels and a single chain-belt will be required to operate the dekle-rails and cause them to move apart or toward each other to gage the width of the paper formed in the machine.

Heretofore hand-wheels fixed to the screw-shafts have been in most cases employed to revolve said screw-shafts and effect adjustment of the dekle-rails; but this was a slow and tedious process. Also, bevel-gears have been fixed to the said screw-shafts, which engaged with other bevel-gears fixed on a shaft supported in bearings extended from the frame of the machine, said shaft also having a crank by which to revolve it; but this mechanism was an expensive one to apply to the machine and was hard to operate.

With my improvement hereinbefore described the adjustment of the dekle-rails can be easily and expeditiously effected and much time saved over the old way of operating them, and the expense of applying it to the machine is comparatively small.

What, therefore, I claim, and desire to secure by Letters Patent, is—

In a paper-making machine, the combina-

tion, with the tubular rails B, the dekle-rails C, the nuts E, and screw-shafts D, of the sprocket-wheels G, fixed on said screw-shafts, the chain belt H, connecting said sprocket-wheels, one of said wheels on each side of the machine having a handle for revolving it, all supported, arranged, and to operate essentially as set forth.

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

NATHAN E. ACKLEY.

Witnesses:
S. N. PIPER,
C. F. DANIELS.