W. A. AITKEN.

FOURDRINIER PAPER MAKING MACHINE.

APPLICATION FILED JULY 22, 1918.

1,353,941. Patented Sept. 28, 1920.

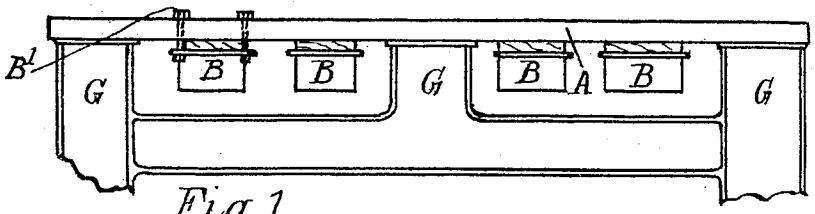


Fig. 1.

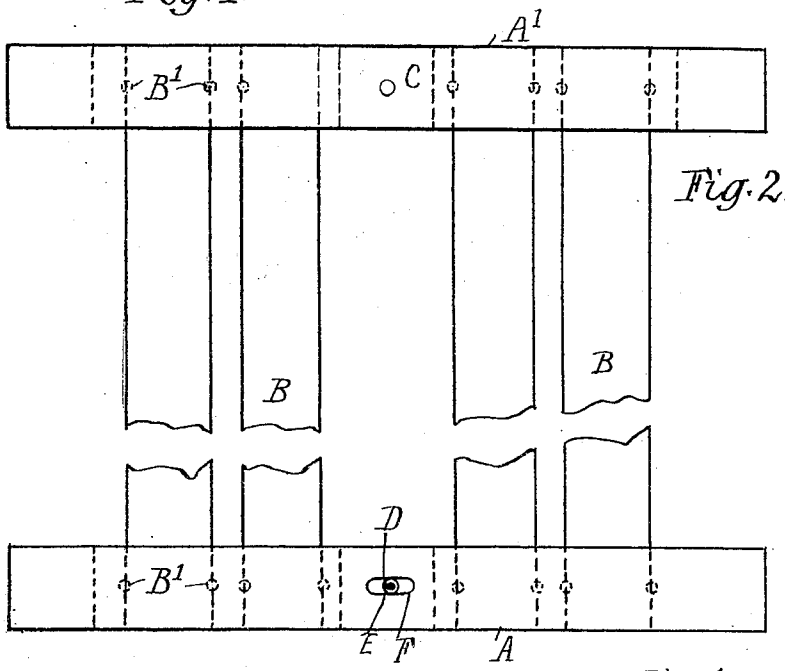


Fig. 2.

Fig. 3.

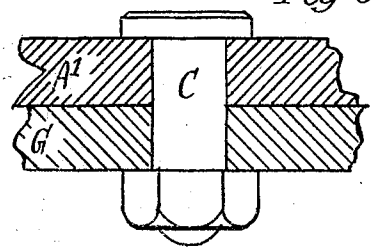
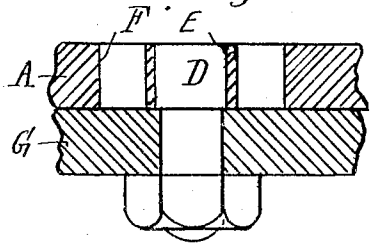


Fig. 4.



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FOURDRINIER PAPER-MAKING MACHINE.

1,353,941. Specification of Letters Patent. Patented Sept. 28, 1920.

Application filed July 22, 1918. Serial No. 246,212.

To all whom it may concern:

Be it known that I, WILLIAM ALEXANDER AITKEN, a subject of the King of England, residing at Gravesend, in the county of Kent, in the Kingdom of England, have invented new and useful Improvements in Fourdrinier Paper-Making Machines; and it has for one of its objects to impart to the boxes a balanced oscillatory or swinging motion from a central point in relation to the boxes, another object being the provision of centrally-applied means for guiding and limiting the oscillatory motion.

With the above and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the novel construction, combination and disposition of parts connected with suction boxes of the aforesaid kind, as will be hereinafter fully described and claimed.

In the accompanying drawings forming part of this specification, and in which like characters of reference indicate corresponding parts, Figure 1 is an end elevation of suction boxes in connection with carrier plates and a portion of the supporting standards for same; Fig. 2 a plan corresponding to Fig. 1; Fig. 3 a vertical section to a larger scale showing the central pivot of one of the carrier plates; and Fig. 4, a vertical section to a larger scale, of guiding and limiting means in the opposite carrier plate.

The carrier plates A and A^1 have the suction boxes B attached to their underside by bolts B^1. The plate A^1 is centrally guided by means of a fixed pin D with roller E engaged in a curved slot F having for radius-center, the pivot C. The ends of the plates A, A^1 can move freely on the upper face formed on the standards.

The purpose served by this centrally disposed motion is to impart an even balanced oscillation alike to all the boxes so as to allow the wire to guide freely and keep to its running center, thereby avoiding attrition and strain of the wire.

By pivoting the box carrier at the center, said carrier will move like the beam of a balance, while the opposite carrier can oscillate to and fro over an arc on either side of the center line. This central motion of the suction boxes allows the ends to be set nearer to the edge of the paper, thus preventing leakage of air and consequent loss of vacuum.

The suction boxes with the carrying plates are operated by suitable gear such as a worm reducing gear with slow reciprocating motion, in any usual manner.

I claim:

In a paper-making machine having movable suction-boxes beneath the Fourdrinier web and flush with the top of their supporting standards, the combination with a limited plurality of said boxes of a centrally pivoted carrier plate at the one end and a centrally guided carrier plate at the other end thereof and longitudinally disposed on said standards, means for fixing the ends of said boxes, to the carrier plates, a pivot in one of said plates between the two middle suction-boxes, an arcuate slot and guide pin positioned opposite said pivot in the other carrier plate.

WILLIAM ALEXANDER AITKEN.