G. CAMPBELL & W. LIDGETT.

Pulp-Strainer.

No. 209,326. Patented Oct. 29, 1878.

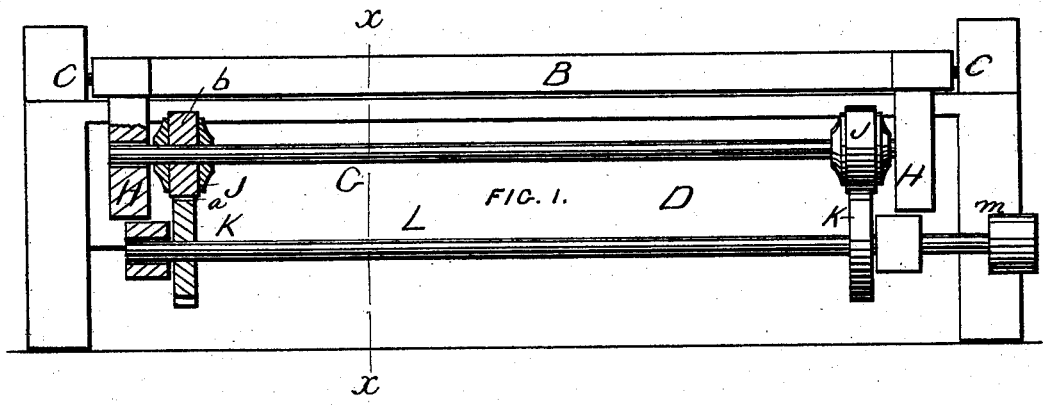

FIG. 1.

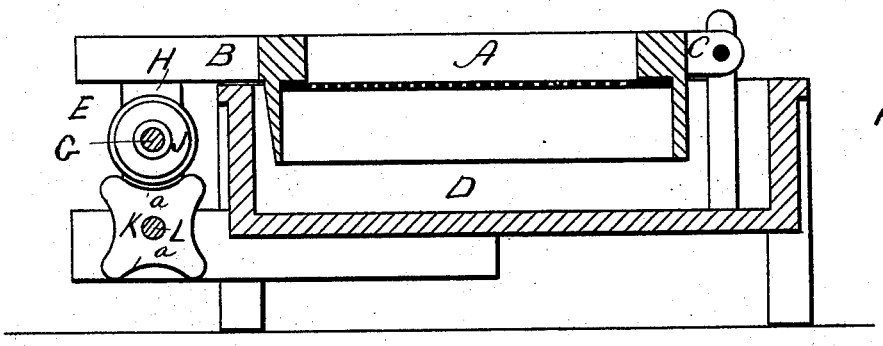

FIG. 2.

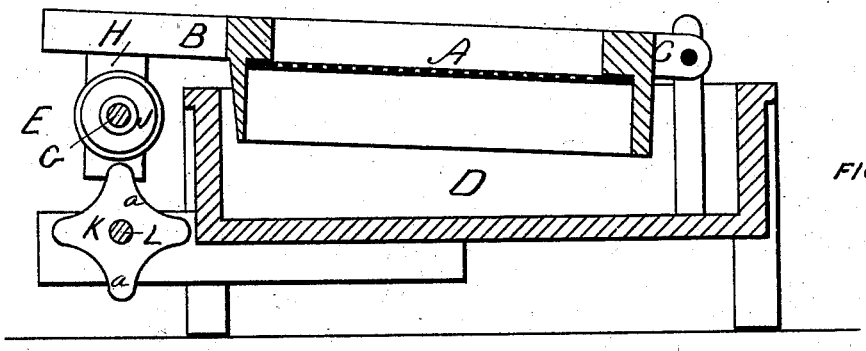

FIG. 3.

WITNESSES.

Geo. H. Earle.

Saml. Despeaux

INVENTOR.

G. Campbell

W. Lidgett.

Per Brown Bros

Attorneys.

UNITED STATES PATENT OFFICE.

GEORGE CAMPBELL, OF NORFOLK, AND WILLIAM LIDGETT, OF NEWTON, MASSACHUSETTS.

IMPROVEMENT IN PULP-STRAINERS.

Specification forming part of Letters Patent No. **209,326**, dated October 29, 1878; application filed March 16, 1878.

To all whom it may concern:

Be it known that we, GEORGE CAMPBELL, of Norfolk, county of Norfolk, and WILLIAM LIDGETT, of Newton, county of Middlesex, and both in the State of Massachusetts, have invented a certain new and useful Improvement in Pulp-Strainers, of which the following is a full, clear, and exact description.

This invention relates to operating the sieve or strainer of the Fourdrinier and cylinder paper-machines, by which pulp made from wood, straw, &c., is strained or screened for stopping knots and hard or bulky portions of the pulp material from passing into the machine.

The invention consists in the arrangement and combination of mechanism, substantially as hereinafter described, for lifting or vibrating the strainer to effect the passage of the pulp through its meshes or perforations or slots; and it has for its object to lessen the friction between the lifting-cam and the abutment against which it bears to lift the sieve; and to this end it consists in providing the sieve with a friction-roller adapted to rest against the cam, by which motion is imparted to the sieve, whereby the friction is reduced and less power required to operate the apparatus, as more fully hereinafter specified.

In the accompanying plate of drawings, Figure 1 is an elevation of a pulp-strainer and its receiving-tank, and of my improved mechanism for the strainer. Figs. 2 and 3 are cross-sections on line *x x*, Fig. 1, but with the strainer in Fig. 2 as in its lower position and in Fig. 3 as in its higher or lifted position from the operation of the mechanism provided to lift or vibrate it.

In the drawings, A represents a pulp strainer or sieve. This strainer A is carried by a hinged frame, B, arranged over the tank D, and the side E of said frame, which is opposite to its hinged side, projects beyond the walls of the tank, and is provided with downward-extending arms or hangers H, in which are the bearings of a horizontal shaft, G. Upon and near the opposite ends of this shaft G, and just within the arms H, are mounted rollers or wheels J, arranged to rest upon the peripheries of cams K, mounted upon a horizontal shaft, L, and having concave faces *a*, corresponding in shape and size to the circumference of said wheels or rollers.

The shaft L is mounted in suitable brackets attached to the tank D, and is provided with a pulley, *m*, fixed upon its projecting end, or may be adapted to be rotated by any other suitable means.

The edge *a* of each cam K is shaped for the screen-frame to raise and fall four times in each revolution of the carrying-shaft L, and to always have the screen-frame at a rest through its roller J thereon; and by this raising and lowering of the screen-frame the screen is vibrated or shaken, as desired, for the straining of the pulp.

The peripheries of the rollers or wheels J are covered with rawhide for resisting the frictional wear of the cams K, serving to protect both wheels and cams, and rendering their action upon each other comparatively noiseless.

In lieu of using rawhide for the rollers, they can be made of hard rubber, iron, or wood; but rawhide or hard rubber is preferable; and also the cam-edges can be arranged so as to raise the screen-frame a more or less number of times than four, as stated.

A pulp-dresser has heretofore been provided with a screen caused to rise and fall by means of contact between cam-wheels and side arms projecting from the screen; and we do not claim, broadly, such construction.

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

In combination with the sieve A and the cams K, the friction-roller J, adapted to bear against said cam, the whole constructed to operate substantially as described.

GEORGE CAMPBELL.
WILLIAM LIDGETT.

Witnesses:
EDWIN W. BROWN,
GEO. H. EARL.