

(No Model.)

2 Sheets—Sheet 1.

R. KRON.

PULP STRAINING MACHINE WITH VERTICAL SCREEN PLATES.

No. 331,304.

Patented Dec. 1, 1885.

Fig. II

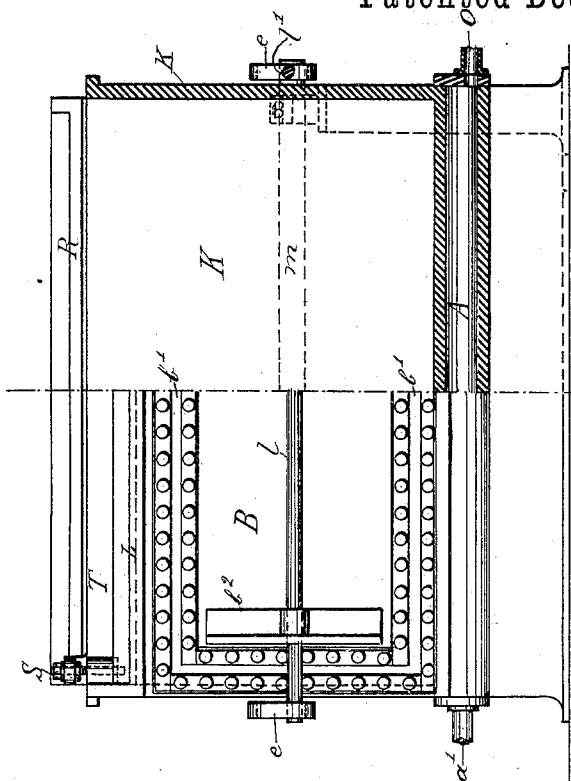
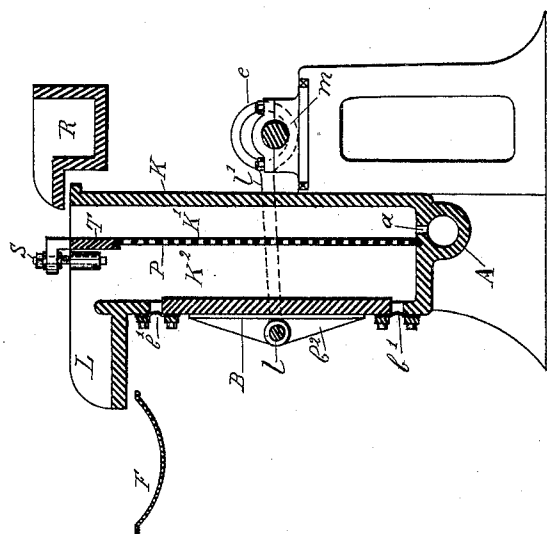


Fig:1



Witnesses:

Emil Blum.
William Schneider

Inventor:

Rudolf Kron

(No Model.)

2 Sheets—Sheet 2.

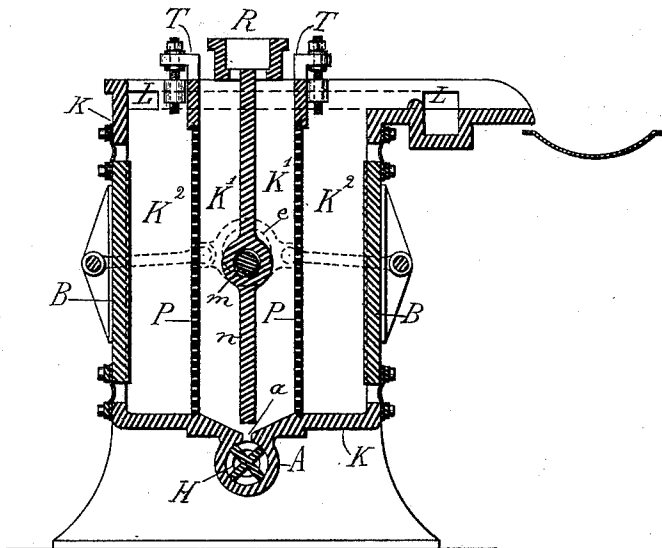
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Fig: III



Witnesses:

Emil Spring
William Lindsay

Inventor:

Rudolf Kron

UNITED STATES PATENT OFFICE.

RUDOLF KRON, OF UNTERSTRASS, NEAR ZURICH, ASSIGNOR TO ESCHER-WYSS & CO., OF ZURICH, SWITZERLAND.

PULP-STRAINING MACHINE WITH VERTICAL SCREEN-PLATES.

SPECIFICATION forming part of Letters Patent No. 331,304, dated December 1, 1885.

Application filed July 1, 1885. Serial No. 170,387. (No model.) Patented in Belgium March 6, 1885, No. 68,106, and in Italy March 6, 1885, No. 18,024.

To all whom it may concern:

Be it known that I, RUDOLF KRON, a citizen of the Republic of Switzerland, residing at Unterstrass, near Zurich, in the Republic of Switzerland, have invented certain new and useful Improvements in Pulp-Straining Machines with Vertical Screen-Plates, of which the following is a specification.

My invention relates to machines for sifting paper-pulp; and it mainly consists of vertical screens, in combination with suitably-located flues, for feeding the pulp, discharge-overflows for discharging the sifted pulp, pipes and conveying devices for leading off the impurities of the pulp, and suitable devices for shaking the latter.

In the specification forming part of Letters Patent No. 315,420, granted to me on April 7, 1885, I have described a self-cleaning pulp-straining machine with stationary curved or flat horizontal screens, said machine having a movable or elastic bottom or diaphragm, and flues or pipes for leading off the impurities of the pulp, also conveyers or valves for leading off such impurities.

My invention consists in using vertical screens in combination with devices shown in the patent referred to.

The object of my invention is to provide means for sifting paper-pulp whenever the area of floor is limited, and it is therefore convenient to use a vertical self-cleaning pulp-straining machine, also when the pulp to be sifted contains much heavy impurities—as, for instance, sand and knots of coarse fibers.

In the accompanying drawings, Figure I represents a vertical cross-section of a machine with my improvements, one vertical screen being provided in this machine. Fig. II represents on the left a half-longitudinal view and on the right a half-longitudinal section of the machine. Fig. III represents a vertical cross-section of a machine with two vertical screens.

Similar letters of reference in different figures indicate similar parts.

In Figs. I and II, K represents a box, of wood or metal, containing the screen-plate P, which fits tight with the sides and the bottom

of the box, and is supported at its top by a bar, T, the latter being on each end fast to the box by a screw, S. The pulp to be sifted is fed from a flue, R, with overflow into the partition K'. The fine pulp passes through the screen-plate P into partition K², and flows off at overflow L into suitable trough, F. The coarse pulp and the impurities, settling in partition K', flow off through slot *a* and pipe A, with outlet *a'* located at the bottom of the box.

In order to help the discharging of the coarse pulp and impurities, the pipe A may contain a revolving fan-valve, H, as shown in Fig. III, or other devices, which are fully described in my former patent referred to above. Such devices may also be replaced by introducing water with adequate pressure through pipe O into pipe A.

In order to keep the pulp in box K in motion, and to facilitate the sifting operation, one longitudinal side of the box is provided with a vertical oscillating plate, B, which is fast to the box K by elastic bands *b'*, made of rubber, leather, or other suitable material. The oscillating motion of plate B is obtained by mechanism commonly used for similar purposes, consisting of two eye-pieces, of which one is shown as *b*², fulcrum-rod *l*, links, of which one is shown as *l'*, and eccentric disks *e e*, keyed on shaft *m*, to which power is imparted.

In Fig. III my invention is shown in a machine with two screen-plates, and two oscillating plates, B B, the latter placed on opposite longitudinal sides of box K, which is divided in two separately-working parts by means of a longitudinal partition, *n*. The pulp supplied by flue R flows, equally divided, into the partitions K' K', the sifted pulp collecting in the partitions K² K², and flowing off by means of flues L L, while the coarse pulp is drawn off either from each partition K' separately, or, as shown in Fig. 3, by means of a central longitudinal slot, *a*, and pipe A.

Having thus fully described my invention, what I claim, and wish to secure by Letters Patent, is—

1. The combination, with a box, as K, flues, as R, outlet-pipe, as A, discharge-overflow, as L,

and oscillating plates, as B, of vertical screens,
as P, all as shown and described, and for the
purpose set forth.

5 2. The combination, with a box, as K, flues,
as R, outlet-pipe, as A, discharge-overflow, as
L, oscillating plates, as B, and vertical screens,
as P, of longitudinal vertical partition-plates,
as n, all as shown and described, and for the pur-
pose set forth.

In testimony whereof I hereunto sign my name, in the presence of two subscribing witnesses, this 18th day of May, 1885.

RUDOLF KRON.

Witnesses:

EMIL BLUM,
WILLIAM SCHNEIDER.