

W. KENNEDY.
Pulp-Engines.

No. 153,774.

Patented Aug. 4, 1874.

Fig. 1.

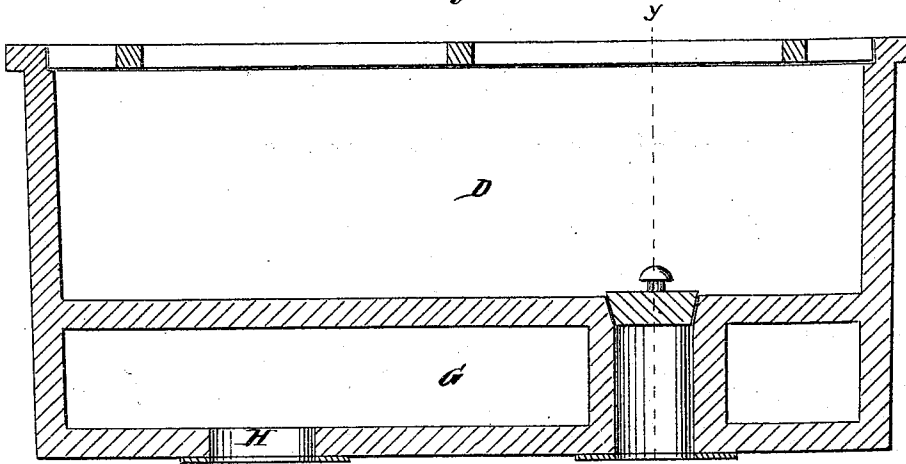


Fig. 2.

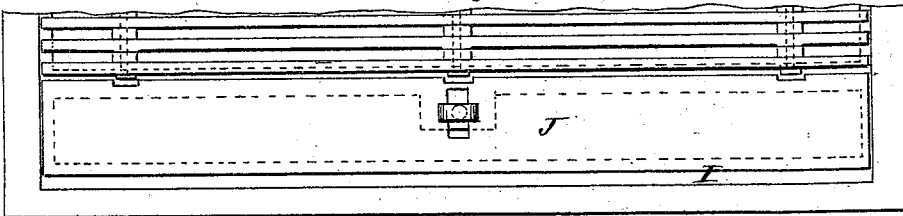


Fig. 3.

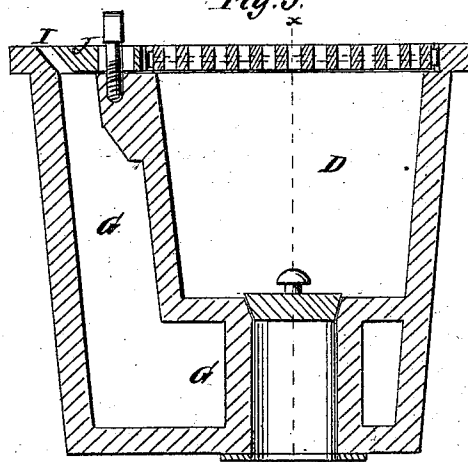
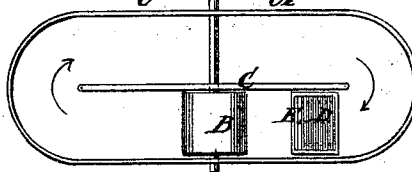


Fig. 4.



WITNESSES:

E. Wolff.
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INVENTOR:

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UNITED STATES PATENT OFFICE.

WILLIAM KENNEDY, OF NEW LONDON, PENNSYLVANIA.

IMPROVEMENT IN PULP-ENGINES.

Specification forming part of Letters Patent No. **153,774**, dated August 4, 1874; application filed April 4, 1874.

To all whom it may concern:

Be it known that I, WILLIAM KENNEDY, of New London, in the county of Chester and State of Pennsylvania, have invented a new and Improved Pulping-Engine, of which the following is a specification:

My invention relates to a combination of sand-trap and water-conduit, the latter having an inlet-aperture that communicates with the opening in the tub or engine, and a long slot through which the water is discharged, said slot being so arranged in relation to the perforated or open-work top of the trap that, when the latter is located in front of the roller, a current is created to quicken the speed of the mingled water and stock, as hereinafter described.

Figure 1 is a longitudinal sectional elevation of the sand-trap taken on the line *x x* of Fig. 3. Fig. 2 is a top view of a portion of the sand-trap. Fig. 3 is a transverse section taken on the line *y y* of Fig. 1; and Fig. 4 is a plan view of the engine, showing the relative arrangement of the sand-trap with the roll.

Similar letters of reference indicate corresponding parts.

A represents the engine-tub, in which the stock is to be washed; B, the roll for grinding the stock; C, the mid-feather for separating the currents; D, the sand-trap for gathering in the sand let free from the stock by the action of the water and carried along with the currents. E represents the long slot or pipe through which the water enters the tub. The sand-trap is cast with a chamber, G, under the bottom and upon one side, extending its whole length, into which the water flows through the pipe-connection H, and out of the top of which proceeds the long slot I, through which the water issues into the engine in a thin sheet extending across the space from the side of the tub to the mid-feather C, and inclining in the direction of the roll B.

This sand-trap is placed in the bottom of

the engine between the front of the roll and the end of the engine-tub, which fronts the front of the roller and where the stock is fed into the tub, so that the inflowing current accelerates the steam coming around from the other side and passing over the sand-trap, so as to pull the stock apart and accelerate the falling of the sand or other heavy matters over the trap, and, at the same time, it forms an eddy in front of the junction of the inflowing stream with the stream in the tub, which facilitates the deposit of sand, lime, &c., in the traps. The location of the sand-trap is also at the point where the stock is fed in, so that the stock, being exposed to the broad streams injected by considerable force, is separated and delivered to the roll in a better and more uniform condition than in the ordinary machines.

The chamber G, through which the water comes to the injecting-slot I, develops the current in a uniform, broad sheet extending the whole breadth of the way, and the current is further developed by the regulating gate or slide J, arranged over the slot to make it wider or narrower, as may be required.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A sand-trap for pulping-engines, having the lateral chamber G, with suitable inlet for admission of the water, and an inclined slot, I, through which it is discharged, substantially as shown and described.

2. The combination, with the roll of a pulping-engine, of the sand-trap D, having perforated top, and the chamber G, having inlet H, adjustable gate J, and inclined discharge-slot I, the latter being located on the side of the trap contiguous to the roll, as shown and described, for the purpose specified.

WILLIAM KENNEDY.

Witnesses:

W. S. HUSTON,
C. N. SPROUL.