No. 662,726. Patented Nov. 27, 1900.

E. A. JONES.

RAG ENGINE.

(Application filed Mar. 31, 1900.)

(No Model.) 2 Sheets—Sheet 1.

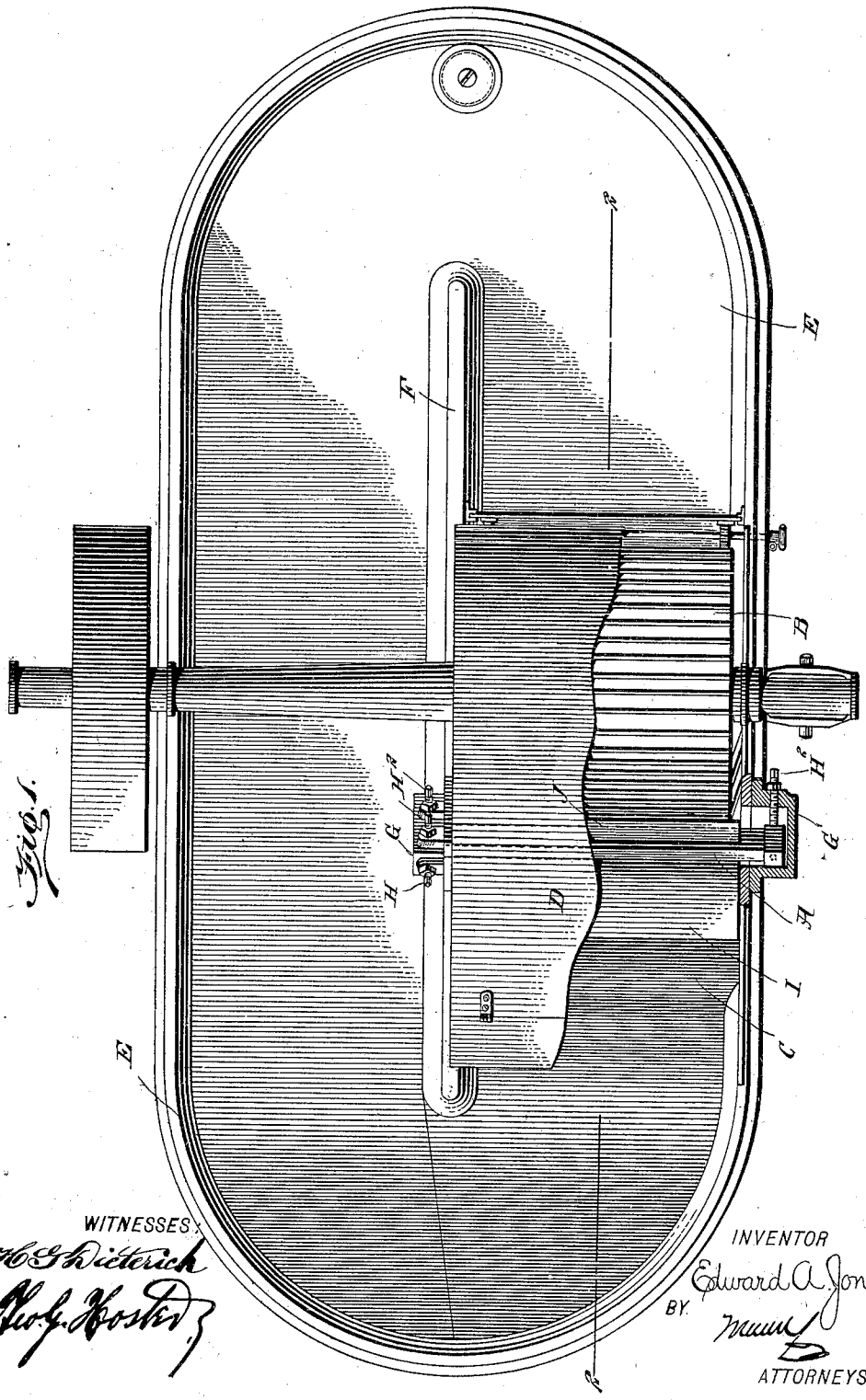


Fig. 1.

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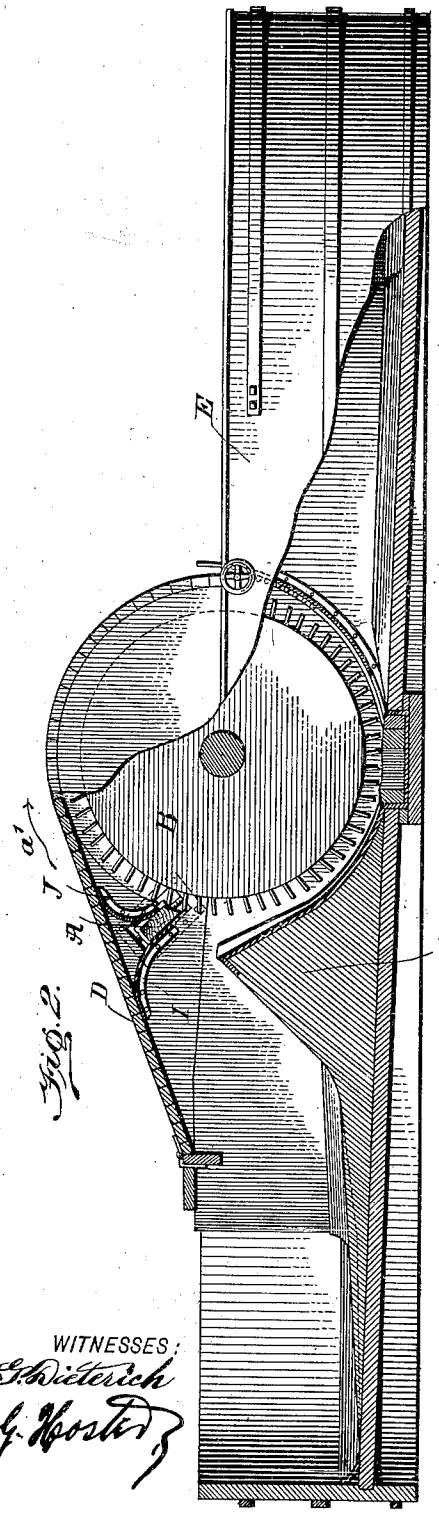


Fig. 2.

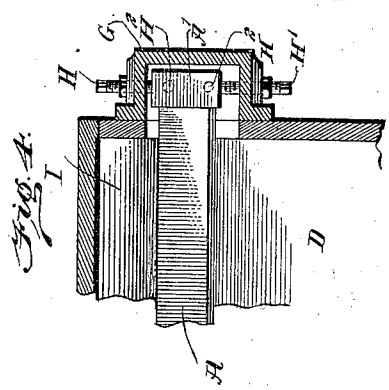


Fig. 4.

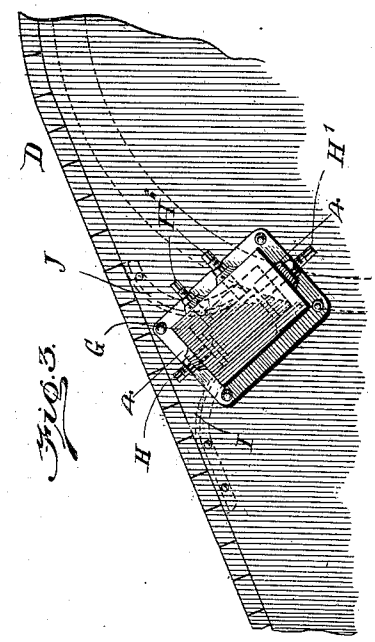


Fig. 3.

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EDWARD ARCHIE JONES, OF PITTSFIELD, MASSACHUSETTS.

RAG-ENGINE.

SPECIFICATION forming part of Letters Patent No. 662,726, dated November 27, 1900.

Application filed March 31, 1900. Serial No. 10,965. (No model.)

To all whom it may concern:

Be it known that I, EDWARD ARCHIE JONES, a citizen of the United States, and a resident of Pittsfield, in the county of Berkshire and State of Massachusetts, have invented a new and Improved Rag-Engine, of which the following is a full, clear, and exact description.

The object of the present invention is to provide a new and improved rag-engine in which a doctor is employed to prevent any of the pulp from being carried over by the beating-drum or from being lodged near the doctor under the cover to insure a free and easy running of the drum, the doctor being adjustably mounted to compensate for wear and removable to permit convenient exchange for a new one when worn out.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the improvement with part of the cover broken out and parts in section. Fig. 2 is a sectional side elevation of the same on the line 2 2 in Fig. 1. Fig. 3 is an enlarged side elevation of part of the improvement, and Fig. 4 is a cross-section of the same on the line 4 4 in Fig. 3.

Doctors heretofore employed in rag-engines were fixed and usually made of metal and were rapidly injured or destroyed by the acid contained in the pulp, and, furthermore, in case solid substances passed between the drum and the doctor it frequently happened that the teeth of the beating-drum were broken out or damaged. Now in order to prevent injury to the doctor from the acid in the pulp and to prevent the breaking of the teeth of the beating-drum I employ a doctor in the form of a bar A of suitable material, preferably of wood, arranged transversely at the rear upper portion of the beating-drum above the backfall C, the ends of the bar extending through slots in the sides of a cover or hood D for the drum B, said hood resting on one side of a vat E and a mid-feather F, as plainly shown in the drawings. The ends of the bar extend into caps G, bolted or otherwise secured to the outer faces of the sides of the cover or hood D. Screws H H′, screwing in each cap, engage the top and bottom of metallic ferrules A′ on the ends of the bar within the caps to permit of adjusting the bar so as to bring its bottom in proper relation to the teeth of the beating-drum B and prevent any pulp from being carried over by the drum as the latter rotates in the direction of the arrow *a*′. When the desired adjustment of the bar A is made, then the latter is secured in position by set-screws H^2, also screwing in the caps G and engaging one side of the ferrules, as is plainly shown in the drawings. From the foregoing it is evident that the bar A can be readily adjusted as it wears away, so as to maintain at all times a proper relation with the teeth of the beating-drum B, and in case a heavy substance passes between the teeth and the bar then the latter is more likely to break than the metallic teeth, and if such breakage occurs a new bar can be readily placed in position without requiring much labor and expense, as would be the case if the teeth of the beating-drum were injured.

On opposite sides of the bar A are arranged flanges I and J, extending transversely and secured at their ends to the sides of the hood or cover D and extending with their upper edges to the roof of the hood D and with their lower edges upon the sides of the bar A, as is plainly indicated in Fig. 2. The lower flange I serves as a deflector to throw the stock back in a downward direction over the rear of the backfall C, while the other flange J prevents any other stock that is carried forward by the beating-drum B between the adjacent teeth from accumulating and hardening around the wooden bar A. Thus from the foregoing it will be seen that the most of the pulp is prevented from going over with the beating-drum B, and that portion of the pulp that is carried along by the teeth of the beating-drum is not allowed to accumulate around the doctor, and consequently is carried back again to the front of the vat, while the doctor remains unobstructed and can consequently, be readily adjusted for the purpose previously mentioned. Thus by preventing some of the stock from going over

the beating-drum the latter is relieved of undue work and can thus be rotated with less power than is ordinarily required in rag-engines as heretofore constructed.

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

1. A rag-engine, provided with a doctor, and flanges on opposite sides thereof, one serving to deflect the pulp thrown up by the beating-drum, and the other preventing the stock from accumulating and hardening around the doctor, substantially as shown and described.

2. A beating-engine, provided with a doctor, and deflecting-flanges at the rear of the beating-drum on opposite sides of the doctor and below the cover for the vat, as set forth.

3. A rag-engine, provided with a beating-drum, a doctor in the form of a bar arranged transversely at the rear upper portion of the beating-drum, means for adjusting said bar relatively to the beating-drum, and deflecting-flanges on opposite sides of the bar, substantially as described.

4. A rag-engine provided with a doctor in the form of a bar, caps into which extend the ends of said bar, and adjusting devices carried by the caps and adapted to engage the bar, substantially as described.

5. A rag-engine, provided with a doctor in the form of a wooden bar, and caps into which extend the ends of said bar, the caps having means for adjusting the bar relatively to the beating-drum, substantially as shown and described.

6. A rag-engine, provided with a doctor in the form of a wooden bar, caps into which extend the ends of said bar, the caps having means for adjusting the bar relatively to the beating-drum, and means on the caps for securing the bar in place after adjustment is made, substantially as shown and described.

7. A rag-engine, provided with a doctor in the form of a wooden bar, caps into which extend the ends of said bar, ferrules on the ends of the bar, the caps having means for adjusting the bar relatively to the beating-drum, and means on the caps for securing the bar in place after adjustment is made, said adjusting and fastening means engaging the ferrules on the ends of the bar, substantially as shown and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWARD ARCHIE JONES.

Witnesses:
JOS. N. TANNER,
WALLACE E. BARDWELL.