

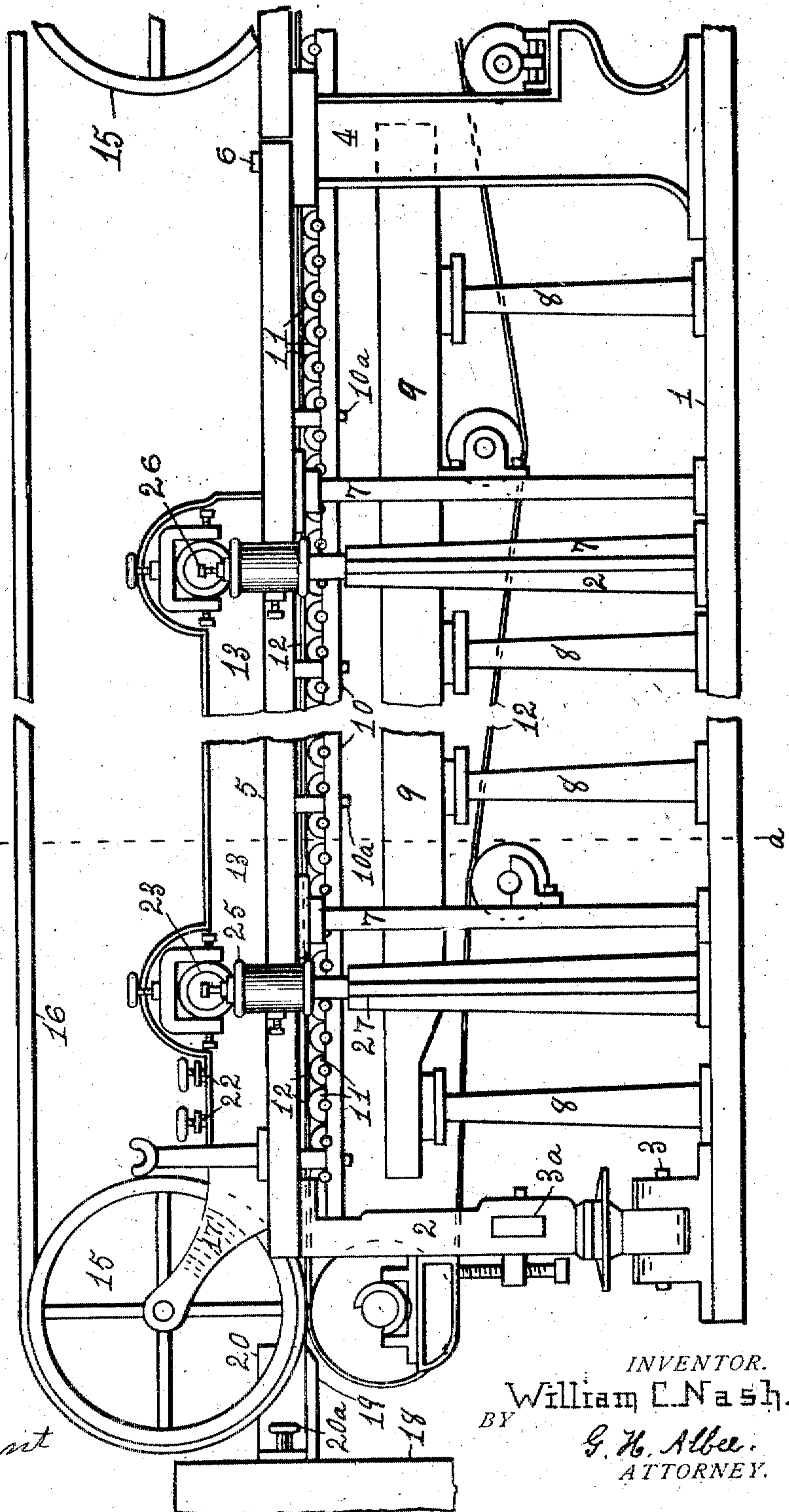
982,845.

W. C. NASH.
PAPER MAKING MACHINE.
APPLICATION FILED JULY 11, 1910.

Patented Jan. 31, 1911.

2 SHEETS-SHEET 1.

Fig. 1.



WITNESSES:
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E. E. Merchant

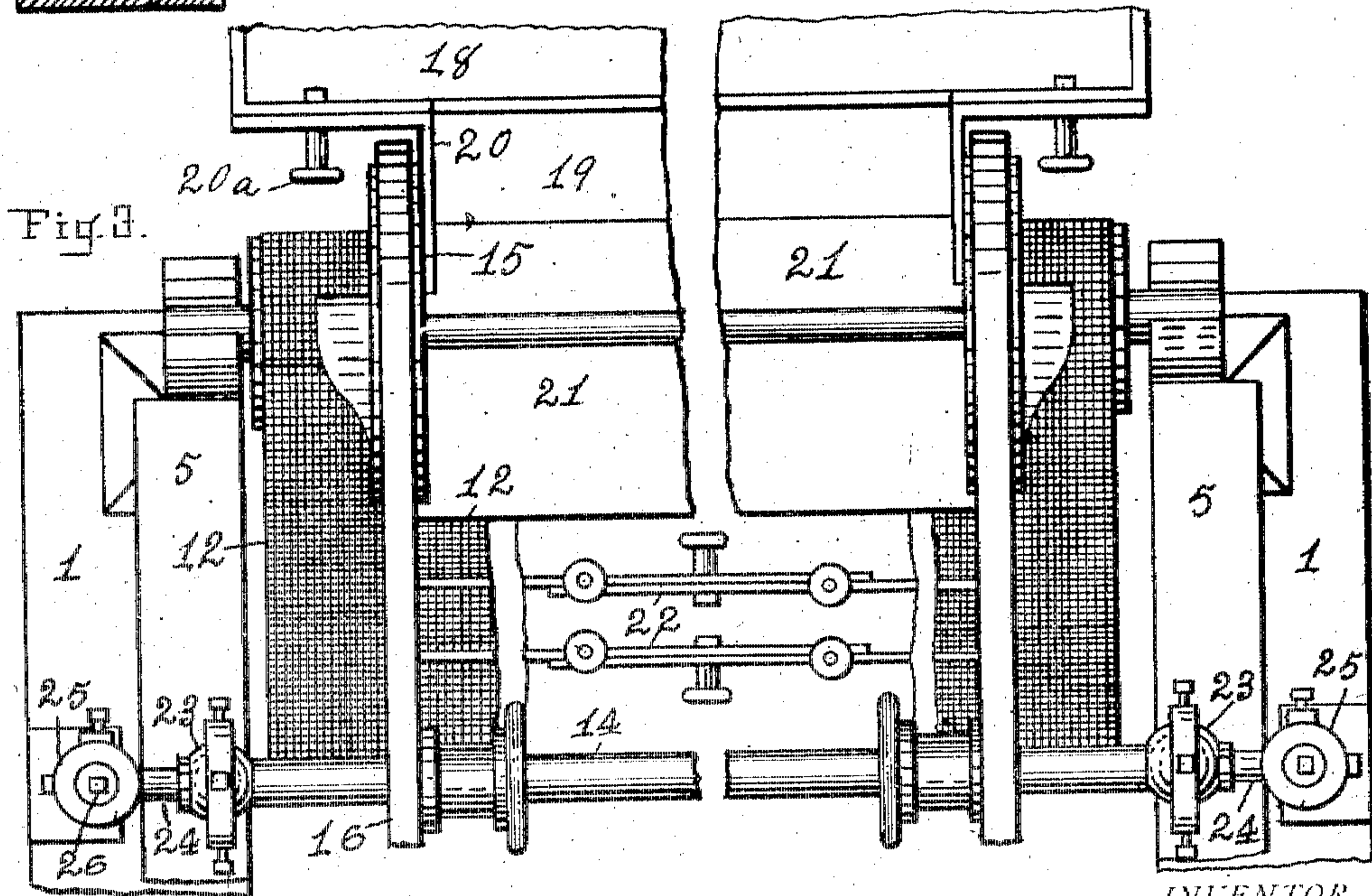
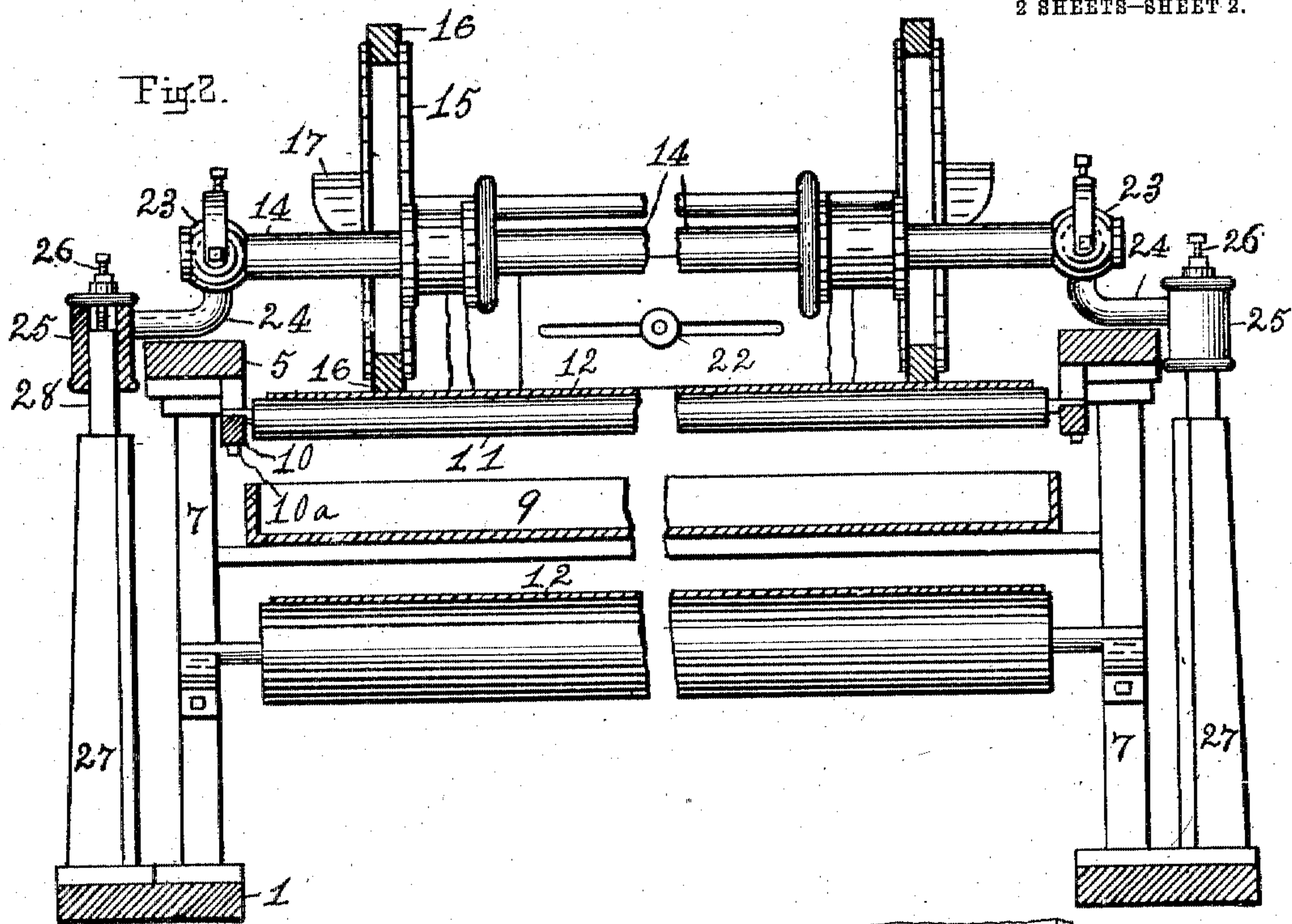
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2 SHEETS-SHEET 2.



WITNESSES:

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PAPER-MAKING MACHINE.

982,845.

Specification of Letters Patent.

Patented Jan. 31, 1911.

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To all whom it may concern:

Be it known that I, WILLIAM C. NASH, a citizen of the United States, residing at Neenah, in the county of Winnebago and State of Wisconsin, have invented a new and useful Improvement in Paper-Making Machines, of which the following is a specification.

My invention relates to an improvement in the Fourdrinier or Harper shaking part of a paper making machine, exclusively, and consists in removing the shaking movement from that portion of the paper making machine which supports the deckle frame, the deckles and slices, at the end of the machine where the paper stock is delivered from the flow box to the paper machine wire, by transferring the support of the deckle frame from the two shaking side rails of the machine frame to a part of the frame of the machine that is fixed, a part that cannot be affected in any manner by the mechanism which operates the shaking movement.

The manner in which this is accomplished is shown in the accompanying drawing, in which,—

Figure 1 is a side elevation of that end of a paper making machine to which the shaking movement is applied, some unimportant parts of the mechanism, those that can in no way be affected by the changes in construction which my invention requires, being omitted. Fig. 2 is a transverse section of the machine upon the line *a, a*, of Fig. 1, as it appears in looking toward the left. Fig. 3 is a plan showing a part of the flow box, the apron board, the ells, and including the first deckle frame connecting shaft, with my improved method of supporting it.

Similar numerals and letters indicate like parts in the several views.

It should be understood that my improvement as here shown is for application to paper making machines already constructed, they usually requiring specially made parts for transferring the supports for the deckle frames from the shaking rails where they have heretofore been supported, to a part of the machine frame which is not shaken, and that in the construction of new machines, slight changes can be made in the form of the deckle frame connecting shaft journal boxes as here shown, which will be obvious to a paper mill machinist, that will lessen the cost of the improvement.

1, indicates the bottom rail, or sill of the machine frame; 2, the pillar at the end of the frame to which the shaking movement is applied, said pillar having a hinge joint at 3, for permitting the upper end of said pillar to oscillate transversely, and a bar 3^a, above the joint 3 for connecting the pillars upon opposite sides of the frame and causing the pillars to oscillate together.

4, is a pillar upon which the upper side rails 5, are pivoted upon the pivot bolts 6. 7, are intermediate supporting pillars under the rail 5; and 8, pillars for supporting a save-all 9 under the machine wire.

10, is a rail suspended below the shaking rail 5, and in the present case is shown as being secured thereto with bolts 10^a, for carrying the many small rolls 11, over which the machine wire 12, is arranged to run.

13, indicates one side frame of the deckle supporting frame; 14, shafts which extend across the machine and connect the two side deckle frames to each other; 15, the deckle pulleys; 16, the deckles, and 17, arms extending rearward from the deckle frames for carrying the shaft on which the pulleys 15 are mounted; 18, the flow box, from which the paper stock is delivered upon the machine wire; 19, apron board extending outward from the flow box upon which the stock is carried by gravity to the wire; 20, elbows, or ells, attaches to the flow box and adjustable in position by means of hand wheels 20^a, for adapting the width of flow to the width between the deckles; 21, a flexible apron extending from the apron board forward upon the wire; 22, slices for gaging the thickness of the the paper sheet.

The shafts 14, which connect the two side frames 13, have heretofore been supported in journal boxes at their ends mounted upon stands under them which were secured to the shaking rails 5, and consequently, the deckle frames, deckles and slices, which were connected directly to the frames and were mounted upon the rails 5, received the same degree of shake as the wire and the rails 5.

For relieving the deckle frames and their attachments from said shaking, the boxes 23 are provided with an arm 24, which extends downward and then horizontally and is provided with a cap piece 25, which is fitted to and adjustably secured with a set screw 26, upon the upper end of a pillar

27, which extends upward from the sill 1. The pillar being erected upon the sill of the machine frame is unaffected by the shaking of the side rails 5. In this manner all shake to the deckle frames and slices is avoided, resulting in making a more uniform and smoother sheet of paper, as there is no springing of the slices on the deckle frames. It will make a stronger sheet, as the fiber upon the upper side of the sheet will be drawn and woven in a zig zag shape by the slices being stationary and not having the motion of the wire. It will overcome foam specks, as the churning of the stock between the slices is avoided. No lumps will form on the slices or ells on apron, as there is no motion to them to cause it. It will be easier on the machinery and deckle straps or bands. The paper will run safer, as the edges will be perfect, no tilting of the deckle straps or thin edges in the paper. It will require less power to drive the shaking mechanism.

At the left hand in Fig. 2, the cap piece 25, is shown partly in section, it being made integral with the arm 24 and journal box 23, and bored for fitting around the stem 28

of the pillar 27, and a set screw 26 is inserted through the upper end of the cap piece for adjusting the height of the cap piece on the stem 28 to correspond with the desired height of the deckle frames.

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

In a paper making machine of the Fourdrinier or Harper type having the usual shaking rails, shaking wire, and deckle frames, deckle frame connecting shafts, deckles and slices, arranged above the shaking wire, a pillar upon a non-shaking part of the machine frame, a stem extending upward from the upper end thereof, a journal box fitted to and mounted upon a deckle frame connecting shaft and being provided with a cap piece or part adapted to be mounted upon and inclose a part of the stem of the pillar aforesaid, and a set screw in said cap piece for adjusting the height of said cap piece upon said pillar.

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Witnesses:

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M. M. PLANNER.