

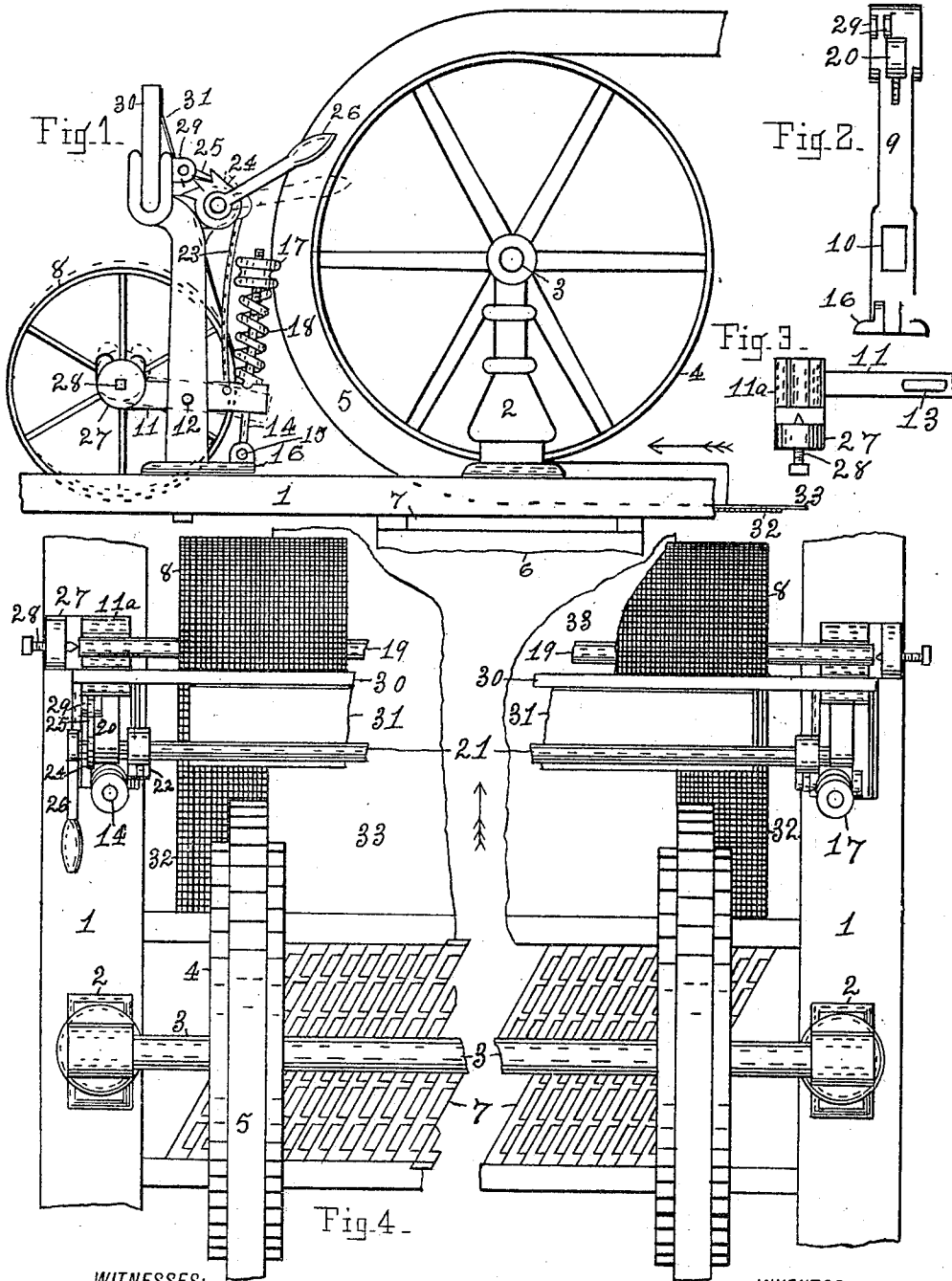
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W. C. NASH.

DANDY ROLL STAND FOR PAPER MAKING MACHINES.

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WITNESSES:

M. N. Stark.
G. M. Albee.

INVENTOR

William E. Nash

BY *G. M. Albee.*

ATTORNEY

UNITED STATES PATENT OFFICE.

WILLIAM C. NASH, OF NEENAH, WISCONSIN.

DANDY-ROLL STAND FOR PAPER-MAKING MACHINES.

No. 830,165.

Specification of Letters Patent.

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To all whom it may concern:

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

My invention relates to a stand for supporting the dandy-roll for revolution upon the frame of a paper-making machine; and it consists of a lever, one at each end of the dandy-roll, mounted intermediate its ends for oscillation upon a suitable stand, upon the ends of which levers the dandy-roll is journaled, the other ends of the levers having a spring by means of which a cushioned journal-box is provided, said end being also provided with means by which the operator can raise or lower both ends of the roll at the same time, the improvement forming a cushioning and lever-raising device for the dandy-roll, its journals being so supported as to be cushioned, while one man can drop the dandy-roll in place upon the sheet of paper without any liability of breaking the sheet at any speed at which the sheet may be running. The cushioning of the dandy-roll supporting journal-boxes is to overcome the irregularities in the circumference of the roll, as no one of them is formed upon a perfect circle. This cushioning of the dandy-roll by means of the spiral spring will "give and take" and the roll be eased up at all times, as the lighter the dandy is the better it will be for the paper, as it then will not give the sheet that crushed appearance in water-marking, as the lighter the dandy the better will the water-mark be and the less in number will be the "pick-outs" from the letters of the water-mark. This is a point that causes paper-mill men to reason that the quality of paper that is made upon a small machine is better than if made on a larger one, as in using the usual style of dandy-stand the roll can be eased up more on a small machine than upon a larger one, the roll being shorter, lighter, and nearer a true circle. The cushioning and lever-raising device of my improvement will overcome these defects in large machines and adapt them for producing equally as good paper as the smaller machines.

The improvement is shown in the accompanying drawings, in which—

Figure 1 is a side elevation of a short sec-

tion of the top rail of a paper-making machine and showing an end view of the deckle-pulley supported upon a stand upon the rail of the machine-frame and a portion of the deckle thereon and at the right of the deckle the dandy-roll supported upon my improved stand. Fig. 2 is an elevation showing the rear side of the dandy-roll stand. Fig. 3 is a plan of the lever in which one end of the dandy-roll shaft is journaled. Fig. 4 is a plan showing a portion, as in Fig. 1, of the side rails of a paper-making machine, the deckles, a suction-box under the deckles, the dandy-roll, and the stand therefor of my improvement, the middle portion of the width of the machine being broken away and the rollers for supporting the wire of the machine being omitted.

Similar numerals indicate like parts in the several views.

1 indicates the top rail of a paper-making machine; 2, the stands which support the deckle-pulley shaft; 3, the deckle-pulley shaft; 4, its pulleys; 5, the deckles; 6, a suction-box having a cover 7; 8, the dandy-roll, and 9 its stand, having an opening 10, through which the lever 11 is to be inserted, it being fulcrumed upon the pin 12 and having at one end the journal-box 11^a for the dandy-roll shaft and upon its other end a slot 13, through which a bolt 14 passes, the bolt being pivoted upon the pin 15 in the base 16 of the stand. The bolt is provided with a nut 17, between which and the lever 11 a spiral spring 18 is arranged. The shaft 19 of the dandy-roll is supported in journal-boxes which are formed in one end of the levers 11, and consequently receive the cushioning effect of the springs 18, the tension of which can be increased or diminished by securing the nut 17 on or off of the bolt 14.

Near the upper end of the stand 9, upon each side of the machine, a bracket-arm projects, in which a shaft 21 is arranged to oscillate. This shaft has secured upon it near each end an arm 22, from the outer ends of which a rod 23 extends to and is pivoted to the lever 11 outside of its fulcrum. Outside of the bracket-arm 20, upon one end of the shaft 21, a ratchet-wheel 24 is secured, with which a pawl 25, which is hinged to the stand, engages, said end of the shaft having also a lever-handle 26, by means of which the operator by oscillating the lever can raise the dandy-roll entirely off of the sheet of paper

and hold it so by means of the pawl or lower it upon the paper as the occasion demands.

At each end of the dandy-roll shaft a bracket-arm 27, carrying a screw 28, is arranged for engaging with said shaft ends, by means of the turning of which screws the dandy-roll can be adjusted longitudinally for bringing the letters of any water-mark thereon into the desired position. The dandy-roll stands need to be made right and left on account of the ears 29, in which the pawl 25 is hinged, and the levers 11 to be so made on account of the bracket-arm 27 thereon, those in Figs. 2 and 3 being for the left-hand rail in Fig. 4. Upon the upper ends of the dandy-roll stands a wiper-board 30 is mounted, it having the usual wiper 31 secured to it and hanging down upon the dandy-roll.

32 indicates the wire of the paper-machine, and 33 the paper being made. The arrows indicate the direction in which the wire and paper are running.

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

1. In a paper-making machine, a dandy-roll stand for supporting the dandy-roll, consisting of a suitable stand adapted to be secured to the top rail of said machine-frame, one at each end of the dandy-roll, a lever fulcrumed intermediate its ends upon each of said stands, one end thereof being provided with a journal-box adapted to support one of the journals of the dandy-roll, the other end having a rod hinged thereto and extending upward, a shaft arranged across the paper-machine frame in suitable supports for its oscillation, an arm secured to said shaft, one near each end thereof and being connected to the upward-extending rods aforesaid, a ratchet-wheel secured upon said shaft, a pawl suitably hinged for engaging with said pawl, and a lever-handle secured to said shaft, by the oscillation of which by the operator said dandy-roll can be raised clear of the sheet of paper being made and so held by means of said pawl and ratchet, or lowered to its posi-

tion thereon, as occasion requires, substantially as described.

2. In a paper-making machine, a dandy-roll stand for supporting the dandy-roll, consisting of a suitable stand adapted to be secured to the top rail of said machine-frame, one at each end of the dandy-roll, a lever fulcrumed intermediate its ends upon each of said stands, one end thereof being provided with a journal-box adapted to support one of the journals of the dandy-roll, and mechanism by which both ends of the dandy-roll can be raised from one end thereof by the operator, clear of the sheet of paper being made and so held, and then lowered to its position upon said sheet, as occasion requires, substantially as set forth.

3. In a paper-making machine, a dandy-roll stand for supporting the dandy-roll, consisting of the stand 9, the lever 11, fulcrumed intermediate its ends upon said stand, one end thereof being adapted to carry a journal of the dandy-roll shaft, the bolt 14, pivoted to the base of said stand, a nut 17 upon said bolt, the spring 18 arranged under said nut and bearing upon the other end of said lever, substantially as set forth.

4. In a paper-making machine, a dandy-roll stand for supporting the dandy-roll, consisting of the stand 9, the lever 11, fulcrumed intermediate its ends upon said stand, one end thereof being adapted to carry a journal of the dandy-roll shaft, the bolt 14, pivoted to the base of said stand, a nut 17 upon said bolt, the spring 18 arranged under said nut and bearing upon the other end of said lever, the shaft 21 having arms 22, the rods 23 extending from said arms to the lever 11, the ratchet-wheel 24, pawl 25, and a lever-handle for oscillating the shaft 21 and thereby raising the dandy-roll from the sheet of paper being made and holding it raised by means of the pawl and ratchet, or lowering thereto, as occasions require, substantially as described.

WILLIAM C. NASH.

Witnesses:

S. J. AUSTIN,

H. A. FISHER.