

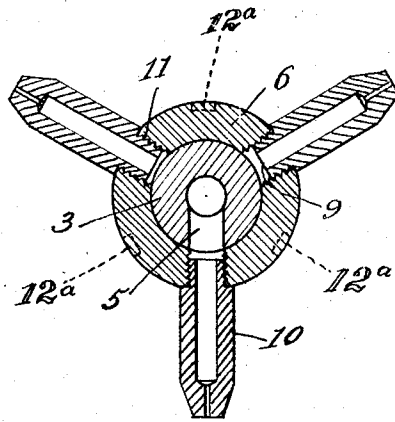
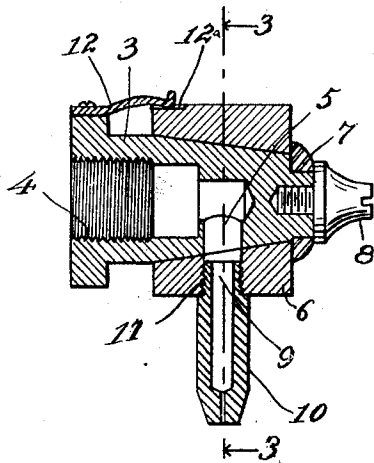
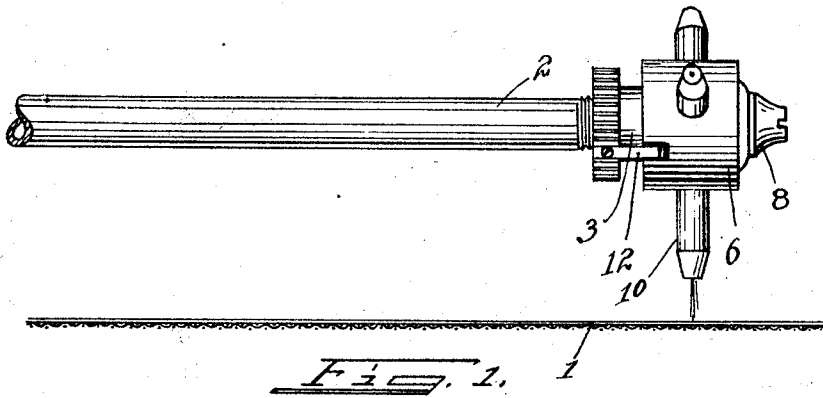
Sept. 22, 1925.

1,554,521

C. REECE

SQUIRT NOZZLE

Filed June 25, 1920



INVENTOR:

Charles Reece

BY

Walter Allen
ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES REECE, OF HAMILTON, OHIO, ASSIGNOR OF ONE-HALF TO CLARENCE A. BARTLETT, OF HAMILTON, OHIO.

SQUIRT NOZZLE.

Application filed June 25, 1920. Serial No. 391,695.

To all whom it may concern:

Be it known that I, CHARLES REECE, citizen of the United States, and resident of Hamilton, in the county of Butler and State of Ohio, have invented a certain new and useful Squirr Nozzle, of which the following is a full, clear, and exact description, reference being had to the drawings, forming part of this specification.

My invention relates to squirt nozzles which are used in connection with Fourdrinier paper making machines in particular, although it has such other applications as will be apparent to the paper manufacturer or other fabricators.

It is the practice in connection with the Fourdrinier machines to trim the paper as it travels with the wires or slit it into sections or cut it across as desired, by the use of a single fine jet of water which impinges directly against the paper film on the wires and severs it exactly as a slitting knife would do.

In order to accomplish this slitting it has been the practice to utilize a pipe which extends across the web of the machine and is adjustable transversely of the web so that the operator can position the jet as he desires, said pipe having a single hole in it for a jet nozzle. Due to the special requisites for a fine and even jet of water, the use of a pipe with a small perforation therein is not fully satisfactory because the jet opening becomes clogged up, thereby destroying the direction and nature of the jet and making it necessary to turn off the water.

My invention is directed to the provision of a special nozzle for the end of the said pipe, which has a plurality of jet forming nozzles, any one of which is movable to registry with holes in the end of the pipe, thus permitting a new jet nozzle to be put into play as soon as the one in use becomes clogged.

Furthermore, I provide that the jet forming nozzles be removable for cleaning without disturbing the nozzle device as a whole, and for other advantages to be noted below.

I accomplish the said objects and advantages by that certain construction and arrangement of parts to be hereinafter more specifically pointed out and claimed.

In the drawings,

Figure 1 is a side elevation of the device in use.

Figure 2 is a central vertical section of the device.

Figure 3 is a section taken on the line 3—3 of Figure 2.

I have illustrated the traveling wire web of a Fourdrinier paper machine at 1, and the movable squirt pipe at 2. My device is of the nature of a three-way cock fitting over a plug set on the end of the pipe, said plug having an opening only in a downward direction, and the cock having three jet forming nozzles which may be selectively positioned in communication with the single opening of the plug.

Thus there is a plug 3, threaded at 4 for screwing into the end of the squirt pipe. This plug has the single opening 5 therein, which when the plug is in place is directed downwardly against the wire web of the machine. The cock body 6 is internally tapered and ground to fit the plug in a water-tight manner, and is held revolvably in place thereon by means of a washer 7 and a screw cap 8, threaded into the plug.

The cock body has the desired number of jet openings 9, there being three in number in the illustration, which openings are preferably threaded. The jet forming nozzles 10 have threaded ends 11 for screwing into the openings in the cock body.

When the body is turned on the plug, any one of the nozzles may be brought into communication with the opening 5, which will result in a jet of water being sent through the nozzle, there being a spring 12 on the plug body engaging locating notches 12^a on the body 6.

As one nozzle becomes clogged with dirt so that it does not send a clean single jet, the cock body may be turned to bring another jet immediately into play, and at some convenient time the clogged nozzle may be removed and cleaned without permitting the escape of water.

It should be noted that all openings in the device are large except in the nozzle itself, so that the only chance of clogging up with fine particles of dirt will lie in the nozzles and not in the pipe or the hole in the cock plug.

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As heretofore stated, I do not wish to be limited in the application of my invention to other uses than the one described, nor do I wish to have my claims construed without the full advantage of the doctrine of equivalents.

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

10 1. A paper cutting device which consists in a water pipe adapted to extend across the web in a paper machine, a plug on the pipe, having a port, and receiving water from the pipe, a cock body revoluble on the plug said body having a plurality of nozzles extending radially thereof and of the pipe, adapted to separately align with the port in the plug upon revolution of the body, said nozzles being individually removable from the cock body, whereby a

nozzle can be changed while another nozzle is operating upon the web.

2. A paper cutting device which consists in a water pipe adapted to extend across the web in a paper machine, a plug on the pipe, having a port, and receiving water from the pipe, a cock body revoluble on the plug said body having a plurality of nozzles extending radially thereof and of the pipe, adapted to separately align with the port in the plug upon revolution of the body, said nozzles being individually removable from the cock body, whereby a nozzle can be changed while another nozzle is operating upon the web, and means for retaining the body in positions on the plug to hold a nozzle in alignment with the plug port.

CHARLES REECE.