

F. F. BOND.
 DEVICE FOR TEMPERING WHEAT.
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1,070,872.

Patented Aug. 19, 1913.

Fig. 2.

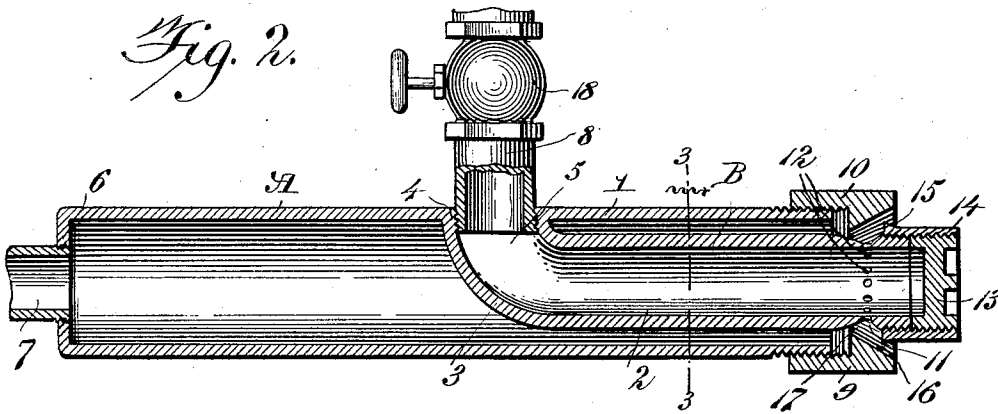


Fig. 1.

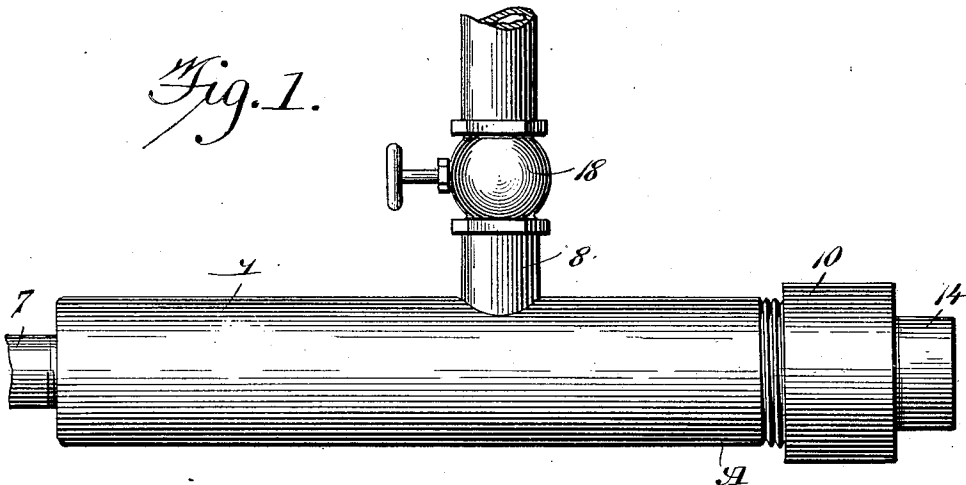
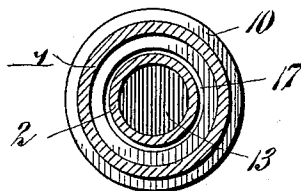


Fig. 3.



Witnesses

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DEVICE FOR TEMPERING WHEAT.

1,070,872.

Specification of Letters Patent.

Patented Aug. 19, 1913.

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To all whom it may concern:

Be it known that I, FRANK F. BOND, a citizen of the United States, residing at Noblesville, in the county of Hamilton and State of Indiana, have invented new and useful Improvements in Devices for Tempering Wheat, of which the following is a specification.

This invention relates to devices for tempering wheat and other grains by spraying the same with water preparatory to milling the same.

The invention has for its object to produce a spraying nozzle of simple and improved construction whereby the desired result may be effected.

A further object of the invention is to produce a simple and improved spraying nozzle having means whereby the operation may be regulated.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawing has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the claims may be resorted to when desired.

In the drawing,—Figure 1 is a side view of a nozzle constructed in accordance with the invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a transverse sectional view taken on the line 3—3 in Fig. 2.

Corresponding parts in the several figures are denoted by like characters of reference.

The improved nozzle comprises in its construction an outer cylindrical tube 1 and an inner tube 2, which latter is located concentrically within the outer tube, extending about half way therethrough, said inner tube being provided at one end with an elbow 3 which is connected with the side wall of the outer tube, as shown at 4, so as to produce an inlet aperture 5 communicating with the inner tube. The outer tube is provided at

its heel or rear end with an annular interiorly threaded flange 6 for the reception of one end of a tube 7, the other end of which is to be connected with a source of supply of compressed air, not shown. The inlet 5 is interiorly threaded for the reception of a tube 8 communicating with a source of supply of water, not shown. The forward end of the tube 1 is exteriorly threaded for the reception of a sleeve 9 having an interior annular flange 10 the opening through which flares outwardly, as shown. That portion of the tube B which projects beyond the front end of the tube A is provided with an annular recess 11 of V-shaped cross section, and at the bottom of said recess are formed apertures 12 through which water may escape, the extreme front end of the tube 2 being obstructed by a plug 13. A portion of the tube 2 in front of the V-shaped recess 11 is exteriorly threaded for the reception of a cap or sleeve 14, the inner end of which has an annular V-shaped flange 15 projecting in the direction of the flange 12 of the cap 9, but spaced from the latter so as to present an annular aperture 16. A similar annular aperture 17 exists between the inner edge of the flange 10 and the annularly recessed portion of the tube 2, said annular aperture 17 being formed between the inclined rear portion of the wall of the V-shaped recess 7 and the inner edge of the flange 10. It will be obvious that by proper adjustment of the cap 9 upon the threaded end of the pipe, the area of the aperture 17 may be increased or diminished at will, thereby regulating the escape of compressed air. The area of the aperture 16 may be regulated by adjustment of the sleeve or cap 14, as will be readily understood.

In the operation of this device, it is intended that the water shall be supplied under little or no pressure, the quantity of water being regulated by simple well known means, such as an ordinary valve 18 on the supply pipe 8. The quantity of the water supply may thus be effectively regulated. The water escaping in numerous small jets through the apertures 12 will be subjected to the pressure of the annular air jet issuing through the aperture 17, and the velocity of which may be regulated by proper adjustment of the cap 9. The spray thus formed

will issue through the annular aperture 16, and the velocity thereof may be regulated by proper adjustment of the cap or sleeve 14.

Having thus described the invention, what is claimed as new, is:—

5 1. In a device of the class described, an external tube, an inner tube having an elbow connected to the wall of the outer tube, said inner tube extending beyond the front end
10 of the outer tube, and the projecting portion of said inner tube being provided with an annular recess V-shaped in cross section and with an annular series of perforations at the bottom of said recess, a plug obstructing the
15 front end of the inner tube, a sleeve threaded on the front end of the outer tube and having a forwardly beveled flange extending in the direction of the recessed portion of the inner tube and spaced therefrom to produce
20 an annular discharge aperture, the area of which may be regulated by adjustment of

the cap, and a sleeve threaded upon the inner tube and coöperating with the flanged cap to produce an annular discharge aperture, the area of which may be varied by adjustment of the sleeve. 25

2. A nozzle comprising inner and outer tubular ducts, a sleeve adjustable upon the outer duct and coöperating with the inner duct to control the quantity of fluid issuing
30 between said outer duct and the inner duct, and a sleeve adjustable on the inner duct and coöperating with the sleeve on the outer duct to vary the area of the annular opening between said sleeves. 35

In testimony whereof I affix my signature in presence of two witnesses.

FRANK F. BOND.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."