No. 791,034. PATENTED MAY 30, 1905.

E. KREUTZBERG.

ATTACHMENT FOR WIND INSTRUMENTS.

APPLICATION FILED AUG. 5, 1903. RENEWED NOV. 16, 1904.

Fig. 1.

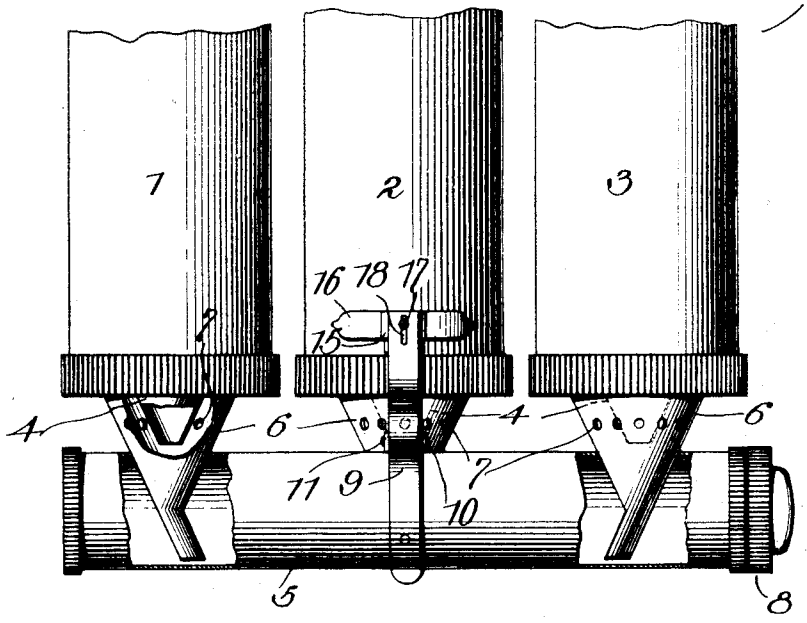



Fig. 2.

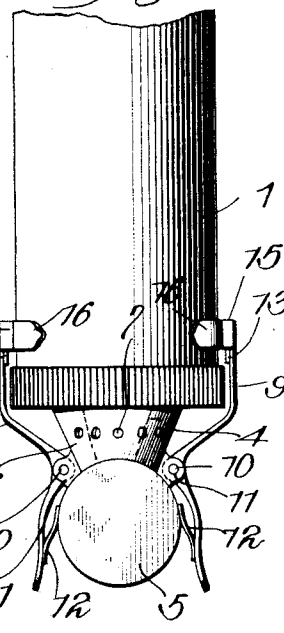



Fig. 3.

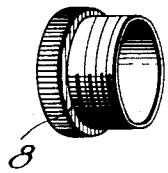
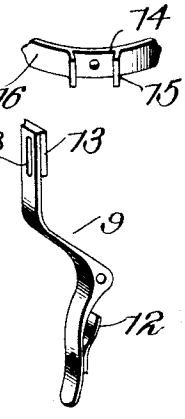



Fig. 4.




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No. 791,034. Patented May 30, 1905.

# UNITED STATES PATENT OFFICE.

ERNST KREUTZBERG, OF ST. LOUIS, MISSOURI.

## ATTACHMENT FOR WIND INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 791,034, dated May 30, 1905.

Application filed August 5, 1903. Renewed November 16, 1904. Serial No. 233,037.

*To all whom it may concern:*

Be it known that I, ERNST KREUTZBERG, a citizen of the United States, residing at St. Louis, State of Missouri, have invented a new and useful Attachment for Wind Instruments, of which the following is a specification.

This invention relates to attachments for wind instruments.

The object of the invention is to provide a moisture-catching attachment for wind instruments of the type in which a plurality of piston-operated valves are mounted in small cylinders within which moisture from the breath of the performer accumulates when the instrument is used and is apt if no receptacle be provided to receive it to drop upon the clothing of the performer and soil the same.

A further object of the invention is to provide an attachment for musical instruments of the type specified which will receive the moisture which accumulates in the valves of the instruments and which when the instrument is laid aside will positively prevent the return of the moisture to the valves of the instrument.

In describing the invention reference will be had to the accompanying drawings, illustrative thereof, in which is exhibited one form of embodiment of the invention applied to the valve-cylinders of a cornet or other similar wind instrument, it being understood that various changes in the form, proportion, and exact mode of assemblage of the elements exhibited may be resorted to without departing from the spirit of the invention.

In the drawings, Figure 1 is a view, chiefly in side elevation, of the attachment applied to the valve-cylinders of a wind instrument, parts being broken away to show the internal construction of the attachment. Fig. 2 is an end view of the parts shown in Fig. 1. Fig. 3 is a detail view of the removable plug in one end of the attachment, and Fig. 4 is a detail view showing the construction of one of the clamping members.

Referring to the drawings, in which corresponding parts are designated by the same characters of reference in the several views, characters 1, 2, and 3 designate the valve-cylinders of a wind instrument, each of which is provided with a short conical tube which extends downward from the lower end thereof, as shown at 4 in Fig. 1. The conical tubes 4 are open at their lower ends and provide means for the escape of the saliva and the moisture resulting from the condensation of the water-vapor normally present in the breath of a performer when it comes in contact with the metal of which the instrument is made. The conical outlet-tubes 4 are ordinarily provided in wind instruments, because the presence of the moisture within the valve-cylinders is disadvantageous to the operation of the instrument and means must be provided for its escape. When wind instruments of the type for which the attachment is intended are in use, the valve-cylinders are held in such position that the moisture escaping from the conical tubes 4 is almost certain to drop upon the clothing of the performer and soil the same.

The attachment proper comprises a cylindrical receptacle 5, having along one side thereof a series of conical inlet-tubes 6, each of which is considerably larger than the outlet-tube 4 at the bottom of each of the valve-cylinders of the instrument, so that the attachment may be readily brought into the position shown in Fig. 1, in which the outlet-tubes 4 are entirely covered by the conical tubes 6, each of which is pierced near the top with a plurality of openings 7 for the passage of air. The inlet-tubes 6, which are adjacent to the ends of the cylinder 5, have their lower ends bent toward the middle of the cylinder, as shown in Fig. 1, the utility of whose construction will be presently explained. The inlet-tubes 6 and the cylinder 5 are preferably formed integral or are rigidly associated by brazing or soldering; but the end 8 of the cylinder is a screw-threaded plug which is readily removed when it is desired to empty the moisture from the clyinder.

The means for securing the attachment to a musical instrument comprises a pair of spring-actuated clamping-arms 9, each of which is pivotally mounted upon a pivot-screw 10, extending through lugs 11 upon the side of the cylinder 5. The arms 9 are similar in contour and are actuated by springs 12,

attached to the lower ends of said arms, as shown, and bearing against the sides of the cylinder 5. At its upper end each arm 9 is provided with a dovetailed block 13, adapted for engagement with suitably-formed grooves 14 in a lug 15 on the back of a curved clamping-jaw 16. The clamping-jaws 16 are adjustably secured upon the arms 9 by means of small screws 17, which pass through slides 18, formed in the upper ends of the arms, as best seen in Fig. 4.

As will be readily seen from an inspection of the drawings, to apply the attachment to an instrument it is only necessary to press the lower ends of the clamping-arms 9 toward the cylinder 5, thereby separating the jaws 16 sufficiently to be slipped over the lower end of the middle cylinder 2 upon the instrument and then to bring the conical inlet-tube 6 into engagement with the lower ends of the cylinders, as shown in Fig. 1. The clamping-arms 9 will then be released and the springs 12 will bring the jaws at once into engagement with the opposite sides of the middle cylinder 2.

The attachment being placed in position, any moisture that passes downward through the moisture-outlet tubes 4 will pass into the cylinder 5 of the attachment and will be retained therein regardless of the position in which the instrument is held, for when one end of the cylinder is raised the moisture will flow down to the other end below the end of the adjacent inlet-tube 5, which is bent toward the middle of the tube, so as to prevent the entry of moisture thereinto, and if the instrument be turned into such position that the attachment lies above the valve-cylinders the moisture within the cylindrical receptacle will gravitate to the side at which the inlet-tubes enter, but will be prevented from entering said tubes, because the tubes extend almost to the opposite side of the receptacle.

In the manufacture of the attachment the cylindrical receiver and the conical inlet-pipes may be formed in one piece, as shown in the drawings, or may be separately cast, and the receiver may, if desired, be formed in sections, as will be readily understood. If preferred, the plug 8, which is inserted into the end of the tubular receptacle 5, and hence has its threads exposed to the saliva collected in the receptacle, may be replaced by a cap which fits over the end of the receptacle. As such changes are mere matters of detail and do not depart from the spirit of the invention, specific illustration thereof is regarded as unnecessary.

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

1. An attachment for wind instruments, comprising a moisture-receiving receptacle of sufficient length to extend across the ends of the several valve-cylinders of a wind instrument, said receptacle having a plurality of openings therein spaced apart to correspond in position to the ends of said valve-cylinders, and means for detachably securing said receptacle in contact with the ends of the valve-cylinders.

2. An attachment for wind instruments, comprising a moisture-receiving receptacle provided with a plurality of lateral openings corresponding in number and position to the valve-cylinders of a wind instrument, a removable closure for said receptacle, and means for detachably securing said receptacle in contact with the ends of the valve-cylinders.

3. An attachment for wind instruments, comprising a moisture-receptacle, a conical inlet-tube, and means for securing the inlet-tube in contact with the end of the valve-cylinder of a wind instrument.

4. An attachment for wind instruments, comprising a moisture-receptacle, an inlet-tube in one side of said receptacle, said inlet-tube being extended partially across the interior of said receptacle and means for securing the attachment to a wind instrument.

5. In an attachment for wind instruments, the combination of a cylindrical moisture-receptacle and an inlet-tube mounted in one side of said receptacle and having the inner terminal thereof extended partially across the interior of said receptacle and bent away from the adjacent end of the receptacle.

6. In an attachment for wind instruments, the combination of a cylindrical moisture-receptacle, a conical inlet-tube mounted in one side of said receptacle and having the inner terminal thereof extended partially across the interior of said receptacle and bent away from the adjacent end, and a removable plug in one end of said receptacle.

7. An attachment for wind instruments comprising a moisture-receptacle and a pair of spring-actuated clamping-arms pivotally mounted on opposite sides of said receptacle and adapted for engagement with the outside of a valve-cylinder of a wind instrument.

8. An attachment for wind instruments comprising a moisture-receptacle, a pair of spring-actuated clamping-arms pivotally mounted on opposite sides of said receptacle, and curved gripping-plates adjustably mounted at the ends of said clamping-arms and adapted for engagement with the outside of a valve-cylinder of a wind instrument.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ERNST KREUTZBERG.

Witnesses:
ALBERT BOSSARD,
WM. HORN.