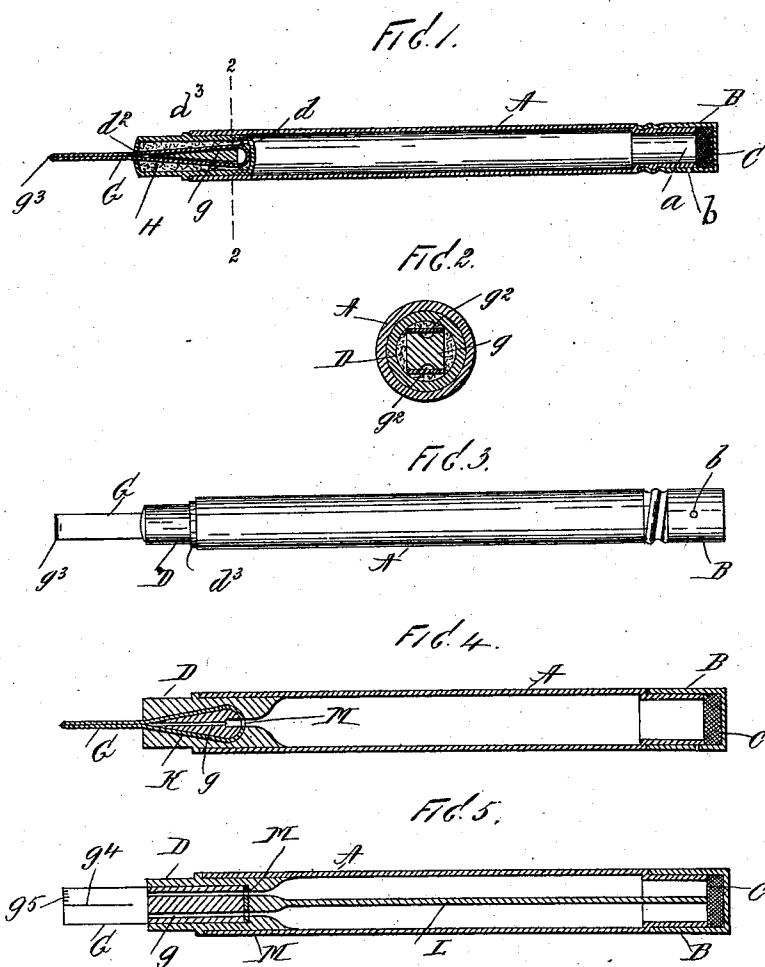


(No Model.)

J. P. KUHN.
SHADING PEN.

No. 567,482.

Patented Sept. 8, 1896.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN PHILLIP KUHN, OF ALTON, ILLINOIS.

SHADING-PEN.

SPECIFICATION forming part of Letters Patent No. 567,482, dated September 8, 1896.

Application filed April 22, 1896. Serial No. 588,564. (No model.)

To all whom it may concern:

Be it known that I, JOHN PHILLIP KUHN, a citizen of the United States, and a resident of Alton, in the county of Madison and State of Illinois, have invented certain new and useful Improvements in Shading-Pens, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to shading-pens, and the object thereof is to provide an improved automatic or fountain pen of this class which is simple in construction and operation, and which is comparatively inexpensive, and which is also an improvement of the shading-pen described and claimed in application, Serial No. 569,871, filed by me November 22, 1895.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a central longitudinal section of my improved shading-pen; Fig 2, a transverse section on the line 2 2 thereof; Fig. 3, a side view, and Figs. 4 and 5 are longitudinal sections of modified forms of construction.

In the practice of my invention I provide a tubular holder or reservoir A, which may be of any desired size and length, and one end thereof is provided with a reduced extension *a*, on which is placed a cap B, said extension and said cap being adapted to be connected by means of a screw-thread, and in the cap B is placed a packing-disk C, composed of rubber or any preferred material, and said cap is also preferably provided on one side with a small perforation or opening *b*, which is adapted to serve as an air-vent, whereby air may be admitted to the holder or reservoir when desired. In the normal position of these parts the air-vent *b* is closed by the extension *a*, and when it is desired to admit air into the holder or reservoir the cap B is given a turn, so as to free the vent from the end of said extension and allow the air to pass therethrough.

In the opposite end of the reservoir or holder A is placed a plug or section D, the inner end of which is provided with one or

more perforations *d*, and the outer end of which is provided with an oblong slot *d*², and formed on said tube D is an annular shoulder *d*³, which abuts against the end of the reservoir or holder A. The inner end of the hollow tube D is detachable therefrom, and I also provide a pen G, which consists of a strip of steel or other preferred metal, which is bent at the middle thereof, and within the loop thus formed is placed a wedge, which is composed of any desired material, and in the sides of which are formed longitudinal grooves or recesses *g*², or, if preferable, a hole through the center thereof may be formed, and the ends of the metal strip are brought together and passed outwardly through the slot *b* in the end of the hollow tube D, as clearly shown in Figs. 1 and 2.

The space within the hollow tube or plug D may be filled in with wax, cement, or other preferred material, as shown at H, and the operation will be readily understood from the foregoing description when taken in connection with the accompanying drawings. The projecting ends *g*³ of the strip of metal from which the pen G is formed may be made of any desired width, and the ink to be used is placed within the tubular holder or reservoir, the cap B being removed for this purpose, and said cap being again placed in position the device is ready for use. The ink will flow through the perforations *d* in the inner removable end of the hollow tube or plug D and into the space formed by folding the strip of metal which constitutes the pen, and then through the longitudinal grooves or slots *g*² in the wedge *g* and out between the separate ends of the pen, as will be readily understood.

In practice the separate ends of the plates of the pen are brought together, so as to allow the ink to flow between them, and are not held together so tightly as to prevent this operation.

In using the pen it will be necessary to admit air thereto, and this is done, as hereinbefore described, by turning the cap B so as to free the air-vent *b* or the tubular extension *a* of the holder or reservoir, in order that air may pass therethrough.

In Fig. 4 I have shown a modified form of construction, in which the tubular holder or

reservoir A is provided at its open end with a plug D, which is preferably composed of two parts, being divided longitudinally, and formed centrally therein is a cavity or receptacle K, which is conical in longitudinal section and the apex of which is directed outwardly, and in this receptacle the pen G is placed, and the inner bow or loop of the pen is provided with a wedge *g*, through which is formed a longitudinal passage which is in communication with the reservoir or holder A, and the operation of this form of construction is the same as that hereinbefore described; and in Fig. 5 I have shown another modification, in which the plug D is provided with two longitudinal passages, and said reservoir is also provided with a longitudinal partition L, and by means of this construction I provide a double holder or reservoir, each of which is designed to receive inks, said inks being of different color, and the plug *g* is also provided with two longitudinal passages which are in communication with said reservoirs by means of projections or openings M, formed in the head of the bow or loop of the pen, and a similar perforation or opening M is provided in the construction shown in Fig. 4, and the object of the construction shown in Fig. 5 is to provide means whereby inks of different colors may be employed at the same time.

My improved pen will be found to be perfectly adapted to accomplish the result for which it is intended, while at the same time being simple in construction and operation, and it is evident that changes in the form and construction of the various parts thereof may be made without departing from the spirit of my invention or sacrificing its advantages.

I also prefer, in the construction shown in Fig. 5, to employ a pen which is provided with a longitudinal slit in its outer end, by which the point thereof is divided, as shown at *g*⁴, and one side thereof is provided with slots or grooves *g*⁵, which aid in spreading the ink and thus assist in shading, as will be readily understood by all those familiar with this class of devices.

Having fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A shading-pen, comprising a tubular reservoir or holder one end of which is provided with a reduced extension on which is mounted a removable cap which is provided with an air-vent, and the outer end of which is provided with a tubular plug, the inner

end of which is provided with a removable perforated cap, and a pen which is composed of a strip of metal bent in the middle and the ends of which are projected through a slot formed in the outer end of said tubular plug, said pen being also provided with a wedge which is inserted between the sides thereof, within said plug, and in which are formed longitudinal slots or passages, substantially as shown and described.

2. A shading-pen comprising a tubular reservoir or holder, one end of which is provided with a reduced extension, on which is mounted a removable cap which is provided with an air-vent, and the other end of which is provided with a tubular plug, the inner end of which is provided with a removable perforated cap, and a pen which is composed of a strip, of metal bent in the middle, and the ends of which are projected through a slot formed in the outer end of said tubular plug, said pen being also provided with a wedge which is inserted between the sides thereof, within said plug, and in which are formed longitudinal slots or passages and said plug being provided on its outer side with an annular shoulder which abuts against the end of the reservoir or holder, substantially as shown and described.

3. A shading-pen, comprising a tubular reservoir or holder, one end of which is provided with a reduced extension, on which is formed a removable cap which is provided with an air-vent, and the other end of which is provided with a tubular plug, and a pen which is composed of a strip of metal bent in the middle, and the ends of which are projected through a slot formed in the outer end of said tubular plug, said pen being also provided with a wedge which is inserted between the sides thereof, within said plug, and in which are formed longitudinal slots or passages, and said plug being provided at its outer side with an annular shoulder which abuts against the end of the reservoir or holder, and said plug being also provided with a filling of wax, cement or other material, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 16th day of April, 1896.

JOHN PHILLIP KUHN.

Witnesses:

FRANK F. FERGUSON,
JAMES SMITH.