

WORTHAM, John B. (update) Asst. Surgeon

Through an unfortunate and much regretted oversight by the author of Confederate Quartermasters, Commissaries, and Agents, the research on John B. Wortham by Enrico Aidala was omitted from the Second Edition. The records for Wortham in the National Archives are sparse. We are fortunate to have the following information courtesy of Mr. Aidala. The electronic file addendums to the Second Edition allow us the luxury of space to show the types of documents found in the files for Officers in the website Fold3.com. *McNeil*

The seller told me he bought this note in Gettysburg, as signed by John Wortham of the 4th Regiment of the Alabama Volunteer Infantry.

I was able, with the nice help of Mr. Rick Bryant, from Portland, Oregon, to retrace his history, as shown below.

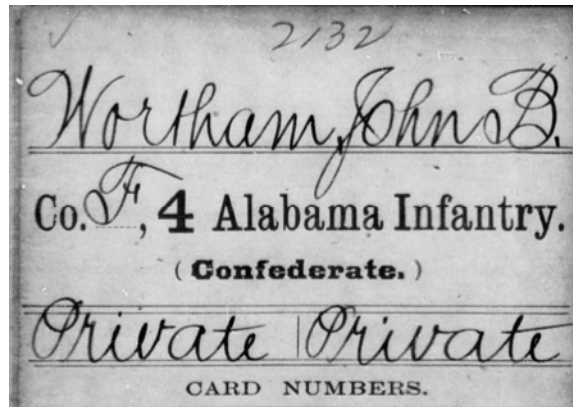


John B. Wortham was born in Wilson County, Tennessee (father: William H. Wortham; mother: Lucy K. Harris), in 1840, according to the Census Records and to the Confederate Records [I suppose the birth date on FindaGrave is wrong, while the death date is correct] (see Find a Grave <http://www.findagrave.com/cgibin/fg.cgi?page=gr&GRid=96393043>).

At some point prior to 1850 the family moved to Madison County, Alabama, where they are found on the 1850 census, at Huntsville. On the 1860 census, they are still in Madison County where John B. Wortham practiced medicine, District No. 1, Madison Co, Alabama.

In 1861 he obtained his M.D. degree at Jefferson Medical College, Philadelphia, Pennsylvania (from Alabama). On April 26th, 1861 he joined Company F of the 4th Alabama Infantry, a volunteer unit, as a private; Company F was raised in Madison County. See below the jacket envelope and

cards of Confederate Records [also check data from Alabama Civil War Service Database at <http://www.archives.state.al.us/civilwar/soldier.cfm?id=226268>]



"Record" *
of the organization named above,
from April 26, 1861, to January 1, 1865.
Record dated: Entrenched camp near Richmond,
Va., December 31, 1864.

Enlisted:	
When	apl. 26. 1861
Where	Huntsville
Period	1 yr.
Born—(State)	Tenn.
Occupation	Physician
Residence—(Nearest P. O.)	Maysville
Age when enlisted	21
Married or single	S.
Remarks:	apptd. asst. Surg. C.S.A. May 28. 62.

John B. Wortham was enlisted at the age of 21 years old, under the command of Capt. Egbert J. Jones. He was single at that time and he was listed as physician. He was present in the Regiment for about one year; he participated to the Battle of 1st Manassas on July 21st, 1861, where Capt. Egbert J. Jones was mortally wounded and to the Battle of Eltham's Landing on May 7th, 1862. He is listed as absent ("left sick Camp Jones") from the Company from September 18th, 1861 to December 1861, but he was regularly paid on October 31st, 1861.

In May 1862, after the Battle of 1st Manassas, he went to Richmond for his medical examination. The date of application of May 28th, 1862, seen in the Record above, most probably is the

date when he left the Camp for Richmond. This information was borrowed from the Archives of the State of Alabama. The period covered from the date the company was organized until January 1st, 1865. This record was made December 31st, 1864, during a long period of stalemate, when the opposing armies were entrenched near Richmond for months. The governor of the State of Alabama ordered all Alabama volunteer units to compile a complete list of all members of each command to include anyone who had served in the command at any time up until then. These records were not a part of the records of the Confederate Army, but were sent back to the governor in Montgomery, and they later were placed in the archives of the state. The clerk of his company would have had no way of knowing his actual appointment date, so he used the only date that he had in his record to account for what happened to Dr. Wortham.

ENGAGEMENTS.
1st Manassas, July 21, 1861 *P.*
Eltham's Landing, May 7, 1862 *P.*

J. B. Wortham
Private, Co. *F*, 4 Reg't Alabama Infantry.
Appears on
Company Muster Roll
of the organization named above,
for *May & June*, 1862.

Present or absent *Present*
Remarks: *Invited to attend
Medical examination
at Richmond.*

His records from the Provisional Army of the Confederate States (PACS) clearly show his appointment date as August 16th, 1862, with his date of rank being back-dated to June 18th, 1862. That is likely the date that he passed his medical exam and from which date he would receive the pay of a Captain in the Cavalry - the rank that Assistant Surgeons carried. The records from PACS state also to see data from the 2nd Battery, Maryland Artillery, where he was assigned from June 18th, 1862, as Assistant Surgeon.

John B. Wortham
Asst Surg.
Appears on a
Register
of Appointments, Confederate States Army.
State *Ala.*
To whom report *Surg. Genl.*
Date of appointment *Aug 16*, 1862.
Date of confirmation *Sept 26*, 1862.
To take rank *June 18*, 1862.
Date of acceptance *Oct 4*, 1862.
Delivered *Surg. Genl.*
Secretary of War *U. S. R.*

Wortham J. B.
Asst Surgeon 2nd Md Arty
Comd June 18.62
See personal papers of
Richd B. Johnson
Co. *D*, *Surgeons*

On February 25th, 1863 "Assistant surgeon J. B. Wortham, Provisional Army Confederate States, will proceed without delay to Fredericksburg, Va., and report to Major-General J. E. B. Stuart, commanding cavalry division, for trial before court-martial." [Special Order 47/25]. I cannot find, in any way, the reason for this trial!

Among the PACS data, there is a document of REQUISITION FOR FORAGE for Surgeon J. B. Wortham issued 14th July 1863. In this document, as well as in his Parole of Honor we could see his signature.

No. 32.

Amputation horse

REQUISITION for Forage for Public Horse, *Wortham* in the service of *Company* Regiment *2nd Maryland Artillery*
 of *U. S. Army*, for *300* days, commencing the 1st of *July*, 1863,
 and ending on the 1st of *October*, 1863, at *Winchester, Va.*

Date of requisition	Number of horses	Number of mules	Number of oxen	Number of sheep	Number of pigs	Number of chickens	Number of ducks	Number of geese	Number of turkeys	Number of other fowl	DAILY ALLOWANCE TO EACH ANIMAL		TOTAL ALLOWANCE	REMARKS
											Grass	Hay		
<i>July 14</i>														
Required														
On hand to be deducted														
To be supplied														

I certify, on honor, that the above Requisition is correct and just; that I have now in service the number of animals for which forage is required, and that forage has not been received for any part of the time specified.

J. B. Wortham Surgeon PACS.
 Commanding

Received at *Winchester, Va.* the 14th of *July*, 1863, at *Capt. George Thompson*
 Quartermaster *U. S. Army*, *Thirty* pounds of corn, *At least* Chick
 pounds of hay, pounds of oats, pounds of fodder, in full
 of the above Requisition.

(Stamp of Quartermaster)

J. B. Wortham
Asst. Medical Officer

Appears on a Register of the
 Inspector of Hospitals Office,
 Richmond, Va.,
 showing quarterly reports of sick and wounded
 received from Medical Officers.

Hospital or regiment *2nd Maryland Artillery*
 Station *Hanover Junction, Va.*
 Report received *Apr. 13, 1864*

He was assigned as the surgeon of the 2nd Artillery Company, usually known as the Baltimore Battery, part of the Lomax Horse Artillery, a field organization composed by independent batteries, while some cards, late in 1865, including his Parole of Honor, refer to another artillery unit, the Stewart Horse Artillery, as written on the cards (I cannot find anything about this unit. Maybe it is an error for the Stuart's Horse Artillery, Virginia?). Here you can see three documents referring to 2nd Md Arty or Baltimore Arty or Lomax Horse Artillery, dated 1862-1864; the last document, dated 1865 refers to Stewarts Horse Arty.

J. B. Wortham
Asst Surg 2nd Md Arty

Appears on a
 Roster
 of officers of Lomax Horse Artillery, December
 31, 1864.
 Roster dated *Dec 31*, 1864

J. B. Wortham
Asst Surg 2nd Md Arty

Appears on a
 Roster
 of officers of Lomax Horse Artillery.
 Roster dated *not dated*, 186
 Date of commission *June 19, 1862*

J. B. Wortham
Surg Stewart's Horse Arty

Appears on a
 List
 of prisoners of war paroled May 8 to June 21,
 1865, at various places in Virginia.
 List dated *not dated*, 186
 Date *May 8*, 1865
 By whom given *A. H. Robinson Lt & A. C. M. G.*
 Where given *Winchester Va.*

The 2nd Artillery Company was active at Yellow Tavern, Catocin Mountain, Frederick, Poolesville, and in McCausland's raid on Chambersburg. Later it served as infantry in the trenches of Petersburg. It lost 1 killed and 2 wounded at Malvern Hill, had 106 men in action at Gettysburg, and surrendered with only 1 man.

At the battle of Yellow Tavern, on May 11th, 1864, Dr. Wortham was the protagonist of an act of courage, described in two books: *The Maryland Line in the Confederate Army 1861-1865* by W. W. Goldsborough and the *The Spotsylvania Campaign* by Gary W. Gallagher.

"On the 11th the battery took position at Yellow Tavern, and soon after the enemy made his appearance in force. A heavy encounter ensued, when the battery was retired about half a mile. For a time there was a lull in the fighting; but upon the arrival of General Stuart it was again ordered forward, supported by the cavalry, and took position to the left of the Brook turnpike, directly in Sheridan's front. The battle was then renewed with great fury. ...Hour after hour this savage fight was waged, but no man faltered at his post, though the groans of the wounded and dying, and the shrieks of maimed and disemboweled horses, were enough to appall the stoutest heart. But General Stuart was there, watching with an anxious eye that little command, upon which so much depended, and they fought on, undismayed, despite the frightful scenes around them. ...Stuart had witnessed it all whilst rallying his broken cavalry, when seizing the colors of the First Virginia, he rode forward, exclaiming, 'Charge, Virginians, and save those brave Marylanders !' Alas! it was his last command on the field of battle, for at the instant he received a pistol shot, and was conveyed mortally wounded from the field, when his men precipitately retreated. Nevertheless, in the confusion and excitement of the moment, Lieutenant McNulty, with some of the gallant fellows, actually drove two pieces off in triumph, despite the efforts of the enemy to prevent them. In this desperate battle at Yellow Tavern, the battery suffered the loss of many men and horses, and two guns, and its brave commander was a prisoner in the enemy's hands. Many were the acts of individual heroism displayed whilst the battle lasted, one of which I will narrate: During the hottest of the fight Private John Hayden was struck by a piece of shell, and dreadfully mangled, and would have bled to death in a few minutes had not the surgeon of the battery, Dr. Wortham, carried him on his back into the woods and stanchd the hemorrhage. In a short time the enemy had possession of the field, but carefully concealing himself and his charge until they had passed on, he that night carried Hayden to a place of safety, where

he eventually recovered. With the two guns saved from the wreck of the battery, Lieutenant McNulty crossed the Chickahominy, closely pursued, and took position on the right of the road, commanding the bridge, where, by a vigorous fire, he checked the enemy's advance and covered the retreat. McNulty then pushed on to Old Church and joined the main body, which had been there reassembled. On the 13th he was ordered to Hanover Junction, where he joined the army of General Lee, with which he remained until after the battle of Cold Harbor, when he was ordered to Early's command in the Valley of Virginia." And the following from Gallagher:

"It was about 4:00 PM when Custer's six-regiment strike force moved into Stuart's line of sight. A section of artillery near Yellow Tavern tried to soften the Confederate position. Its shells fell among the Baltimore Light Artillery with both frequency and effect. Shrapnel tore enough the battery's horses, eliciting shrieks unnerving enough 'to appal the stoutest heart.' The shells also sought out humans. A fragment badly smashed Pvt. John F. Hayden's shoulder. The battery surgeon, Dr. John B. Wortham, heroically hoisted Hayden onto his back and staggered off with him into the relative shelter offered by nearby woods, where he managed to stop the bleeding and save Hayden's life. Back at the battery their comrades finally found the range and made Yellow Tavern 'a decidedly hot place'."

On May 8th, 1865 he was Paroled as Surgeon, Stuart's Horse Artillery, Winchester, VA [Description: Height: 6 feet; Complexion: fair; Hair: dark; Eyes: hazel]. Here is again his signature.

Head Quarters Army of the Shenandoah,
OFFICE PROVOST MARSHAL GENERAL,
Winchester, Va., May 8th 1865.
I, J. B. Wortham, Surg.
OF Stuart's Horse Art.
C. S. Army, do hereby give this my Parole of Honor, that I will not take up arms against the United States Government until I am regularly exchanged. And that if I am permitted to remain at my home I will conduct myself as a good and respectable citizen, and will respect the laws in force where I reside, and will do nothing to the detriment of, or in opposition to the United States Government.
J. B. Wortham, Surg.
DESCRIPTION:
Age, 25, Height, 6, Complexion, fair
Hair, dark, Eyes, hazel
Sworn to and subscribed before me,
this 8th day of May 1865.
J. B. Wortham
Provost Marshal General.
Wm. B. Allen
Ala

On April 25th, 1866 he married, Sarah Roberta Baker, Frederick County, Virginia. On May 28th, 1867, Dr. Wortham received patent No. 65322 for his invention Improvement in Lamp-Burners, while he was still living in Huntsville, Alabama.

Between 1867 and 1870 he moved to Frederick Co, Virginia, and in 1870 he was practicing medicine in Stonewall Township, Frederick Co, Virginia. Later, on July 31st, 1883, Dr. Wortham received another patent, No. 282144, for his invention of Syringe Piston, and at that moment he was living in Winchester City, Frederick Co, Virginia (see the patent illustrations at the end).

On the 1870 census, he appears, along with his wife, Roberta, and 2 year old daughter Norma Lee (written as Norman Lee), in Winchester City, Frederick Co, Virginia, the place where he lived until his death and where he was buried. Here he also worked as a photographer (see some examples below). As doctors did not necessarily make very much money then, he may have started photography as a hobby, and then found he could supplement his income by becoming a professional photographer.

In January 1888 his wife Sarah died and Dr. Wortham died on August 12th, 1889: he committed suicide and this was unexpected. Perhaps he acted upon a broken heart? The Georgia Enterprise, August 22nd, 1889 wrote: "Dr. J. B. Wortham, a prominent citizen of Winchester, Va., committed suicide Monday, by shooting himself through the head. No cause is assigned for the dead." The New York Times also wrote about his death:

A PHYSICIAN'S SUICIDE.

WINCHESTER, Va., Aug. 12.—Dr. J. B. Wortham, a prominent citizen, committed suicide to-day by shooting himself through the head. He attended church last night, and was found in his room at 5 o'clock this afternoon in bed, undressed, with the pistol in his hand. The act is supposed to have been committed between 12 and 1 o'clock this morning. He was a native of Huntsville, Ala., and was a surgeon in the Confederate Army, and remained here after the war. His wife died several years ago. He leaves a daughter eighteen years of age. A Coroner's inquest was deemed unnecessary.

He is buried in Mount Hebron Cemetery, Winchester City, Virginia.

Conclusion

My research has got the purpose to show the fascinating history of Dr. J. B. Wortham, a Confederate Surgeon who was a soldier, a physician, a hero and also an inventor and a photographer. I bought a note with a signature I believe it is his signature, but I would wait for your respected opinions. Since the endorsement doesn't show a date, I believe issuance is inferred, but not proved.

Enrico Aidala



Patents by John B. Wortham

United States Patent Office.

JOHN B. WORTHAM, OF HUNTSVILLE, ALABAMA.

Letters Patent No. 65,322, dated May 28, 1867.

IMPROVEMENT IN LAMP-BURNERS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN B. WORTHAM, of Huntsville, in the State of Alabama, have invented a certain new and useful Improvement in Lamps; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters and marks thereon, which said drawings form part of this specification, and show my improvement as applied to a lamp, and in detail—

Figure 1 thereof being a view in elevation of a burner attached to the upper part of the lamp.

Figure 2 being a view of an inner part of the burner.

Figure 3 being a view of the wick-tube and plate; and

Figure 4, a view of the ventilating collar or cylinder.

In each of these figures like parts are indicated by like letters.

My invention is more particularly intended to be used on lamps for burning coal oil, but may be used in lamps of any construction and designed for any other oil or illuminating fluids. My improvement will render any lamp safe and non-explosive, and will afford a clear and good flame, and free and fully supply of air thereto.

The wick-tube *a* is firmly fixed to the plate *b*, so that its joint is air-tight. This may be produced by having the two pieces fitting closely together and then burnished, or, in case the tube is round, by finely-cut screw-threads. Upon the edge of the plate *b* are teeth, which, as the ventilating collar or cylinder *c* is moved up or down, fit into the slots of that cylinder, and free them from any soot or other matter that usually tends to fill up or clog the ventilator. This cylinder *c* surrounds the body part *d* of the burner, and may be moved up and down thereon, so that the lamp may be lit without elevating the cap *e*. A coiled spring *f*, surrounds the body part *d*, the upper end of which is affixed to the body at *x*, while the lower end *x'* is affixed to the lower end part of the ventilating cylinder *c*. The fitting of the lower end of this spring to the cylinder *c* is indicated by the dotted lines in fig. 4. The tendency of this spring is to elevate the cylinder *c*, and to keep its upper edge in contact with the cap *e*. Other means than this spring may be used in some cases, and on some lamps only friction-plates or springs would answer. To the body part *d* are affixed plates, the one, *g*, being for the hinge of the cap, and the other, *h*, for the catch. A small plate, *i*, on the cap, when the cap is thrown fully up, as is represented by the red lines in fig. 1, will fit into the space between the plate *j* on the cylinder *c* and the sides of the cylinder, and thus hold the cap up. As this burner will be air-tight, holes *k* through the body part, as indicated in fig. 2, will allow air to pass into the lamp as the oil is consumed, and hence there can be no chance for explosion. When the cylinder *c* is pressed down, the plate *b* can easily be brushed off, and the interior of the burner readily be cleaned. The different positions of the cap and the cylinder and the parts of the burner are fully indicated by the black lines in the one case, and the red lines in the other case of fig. 1. In globe or stationary lamps the burner can be readily lit without disturbing the cap or chimney or globe.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The ventilating collar or cylinder *c*, constructed and operated and for the purposes substantially as herein recited.

2. In combination with the cylinder *c*, the toothed edge of the plate *b* or its equivalent.

3. The plates *i* and *j* for holding the cap open, as described.

This specification signed this 5th day of April, 1867.

J. B. WORTHAM.

Witnesses:

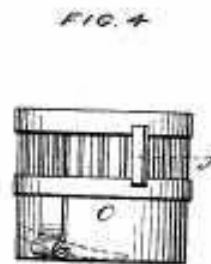
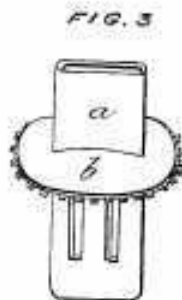
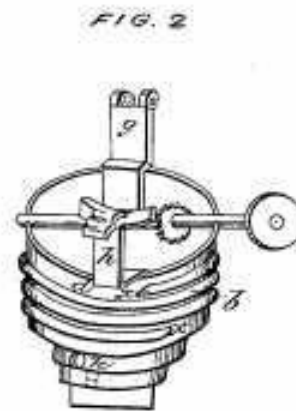
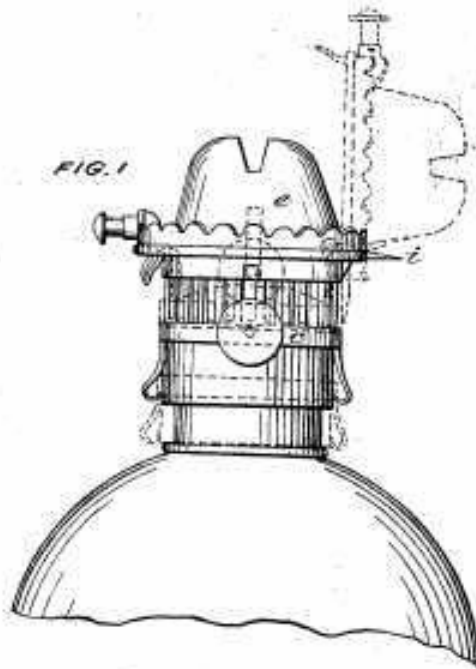
THOS. T. EVERETT,

JOHN C. PEDRICK.

J. B. WORTHAM.
Lamp Burner.

No. 65,322.

Patented May 28, 1867.



WITNESSES:

Thos. J. Parker
Thos. D. Condit

INVENTOR:

J. B. Wortham

UNITED STATES PATENT OFFICE.

JOHN B. WORTHAM, OF WINCHESTER, VIRGINIA, ASSIGNOR OF ONE-HALF
TO GEORGE S. CRANE, OF SAME PLACE.

SYRINGE-PISTON.

SPECIFICATION forming part of Letters Patent No. 282,144, dated July 31, 1883.

Application filed May 25, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. WORTHAM, a citizen of the United States, residing at Winchester, in the county of Frederick and State of Virginia, have invented certain new and useful Improvements in Pistons, of which the following is a full, clear, and exact description.

This invention has for its object the provision of an anti-regurgitating expansible piston, adapted to be operated while within the working-cylinder, and without removal therefrom, from outside said cylinder.

Before my invention pistons have been variously constructed to render them expansible—as, for example, by making them of elastic material adapted to be spread by an adjustable conical rod; and such a piston has been arranged upon a tube through which and the piston the conical rod projects and is operable exteriorly of the cylinder without removal of the piston therefrom. Regurgitation has been prevented, in a measure, at least, by constructing the piston of reversed cups; but no provision has been made in such pistons for compensating by adjustment or expansion for wear, and for insuring a tight or close fit of the piston in its cylinder.

Referring to a single application of my invention, the piston of a hypodermic syringe must fit its cylinder with great accuracy in order to discharge the full quantity of the small contents of the syringe, and such a piston must be capable of a very ready adjustment to insure such fit; and stating my invention with reference to such a use thereof, it consists of a piston composed of reversed cups of leather or equivalent flexible, soft, yielding material expansible under the action of a conical tube adjustable on the piston-rod, and constructed and arranged as hereinafter specifically set forth and claimed, to insure an accurate fit of the piston in the cylinder and prevent regurgitation of the liquid to be injected.

In the accompanying drawings, in the several figures of which like parts are similarly designated, Figure 1 is a perspective view of the piston, rod, adjusting or expanding tube, and cylinder-cap detached, illustrating my invention. Fig. 2 is a perspective view of the adjusting or expanding tube; Fig. 3, a perspective view of the piston-rod; Fig. 4, a per-

spective view of the upper member of the piston; Fig. 5, a perspective view of the lower member of the piston; Fig. 6, a perspective view of the nut to hold the piston to its rod; Figs. 7 and 8, perspective views of the cap and body or cylinder of a hypodermic syringe. Fig. 9 is a longitudinal section, enlarged, of a hypodermic syringe (the needle being omitted) illustrating one application of my invention, and Figs. 10 and 11 perspective views of other forms of the upper member of the piston.

The letter *a* designates a screw-threaded rod extending through an interiorly screw-threaded tube, *b*, which is adjustable or movable longitudinally upon said rod by engagement with its thread, and for convenience in effecting such adjustment said tube may have a milled head, *c*, by which it may be rotated. The exterior of the tube *b* is smooth and adapted to fit a cap, gland, or box, *d*, of a working-cylinder or pump-barrel, *e*, for the piston. The rod *a* and the tube *b* jointly constitute the piston-rod, and suitable provision, as a button or knob, *f*, is made for reciprocating said rod in its cylinder. The lower end of the rod *a* is shouldered at *g*, and below said shoulder is preferably reduced in diameter and threaded at *h*. The lower end of the tube *b* is made conical, or provided with a wedge, (herein designated by *i*.)

The upper member, *k*, of my piston is a rectangular or equivalent bit of leather or like soft flexible substantially inelastic material, perforated to fit on the screw *h*, up against the shoulder *g*, around which and the rod it is shaped or molded into essentially a split tube, one end (the lower) being closed, (against the shoulder *g*), and the other (the uppermost) being open. The lower auxiliary or working-face member, *l*, of the piston is a smaller reversed cup or tube, which may be cut and shaped of sole-leather, and is secured upon the screw *h*, with its base against the closed end of member *k*, by a nut, *m*, within, inclosed or surrounded by it.

Any expansion of a piston at its lower end which would tend to increase the diameter and circumference of the lower part with a gradually-diminishing diameter upward would have the effect of badly binding the piston as it is projected to discharge the contents of a

cylinder; but I find that the expansion of the piston in the exact opposite effects an easy projection of the piston without in the least depreciating the tightness of fit necessary to insure the discharge of the contents, and at the same time completely curing or obviating that regurgitation common in many kinds of hand-pumps, syringes, and the like. I therefore arrange the cone or wedge *i* so as to be longitudinally adjustable on the stem or rod *a*, to be more or less inserted into the split tube-like upper member, *k*, of my piston to expand said piston initially from its top; but such expansion is never of so great an extent as to leave any material opening at the meeting edges of its sides. Now, the inverted cone formed in my piston by this upper member not only insures the proper discharge of the contents of the cylinder and prevents regurgitation, but it imparts an increased suctional action to the piston, as it insures tight fit in the barrel or cylinder.

The adjustment of the cone *i* for the expansion or contraction of the piston is effected by the rotation of the tube *b* upon the rod *a*, which is performed outside the cylinder or barrel without removal of the piston.

The rod *a* and tube *b* may be threaded to the extent shown, or to a less extent, sufficient, however, to enable the cone or wedge to be inserted the required distance in the washer or piston member *k*.

In Fig. 10 I have shown a preferred form of upper member or washer, *k*, it differing from that hereinbefore described in having its slits made diagonal, or the meeting edges beveled or skived, so as to overlap and thus insure the registering of these edges. This upper member of the piston may also be made as an un-

cut thimble without slits, as in Fig. 11, and its expansion provided for by its elasticity, or quality of being stretched under the operation of the wedge.

What I claim is—

1. A piston composed of two inverted-cup-shaped members placed base to base upon the piston-rod and secured thereon, combined with an adjustable wedge or cone movable within the upper member of said piston to expand said member, substantially as described.

2. The combination, substantially as shown and described, of a piston having a tube-like upper member, and a lower auxiliary member or working-face, with a rod or stem to which they are secured, and a cone or wedge adjustable upon said rod or stem exteriorly of the barrel or working-cylinder, to vary the circumference or diameter of said upper member.

3. The combination, substantially as shown and described, of a threaded rod or stem, *a*, shouldered at its lower end, and provided with a contracted threaded portion, *h*, an interiorly-threaded tube, *b*, arranged upon said rod, and provided with a cone or wedge at its lower end, and an operating device to rotate it upon the rod or stem and thereby adjust it longitudinally upon the same, and a two-part piston secured to said rod or stem, with its upper part or member adapted to receive within it the cone or wedge of the adjustable tube *b*, to be by its adjustment varied in diameter, as and for the purpose specified.

In testimony whereof I have hereunto set my hand this 24th day of May, A. D. 1883.

J. B. WORTHAM.

Witnesses:

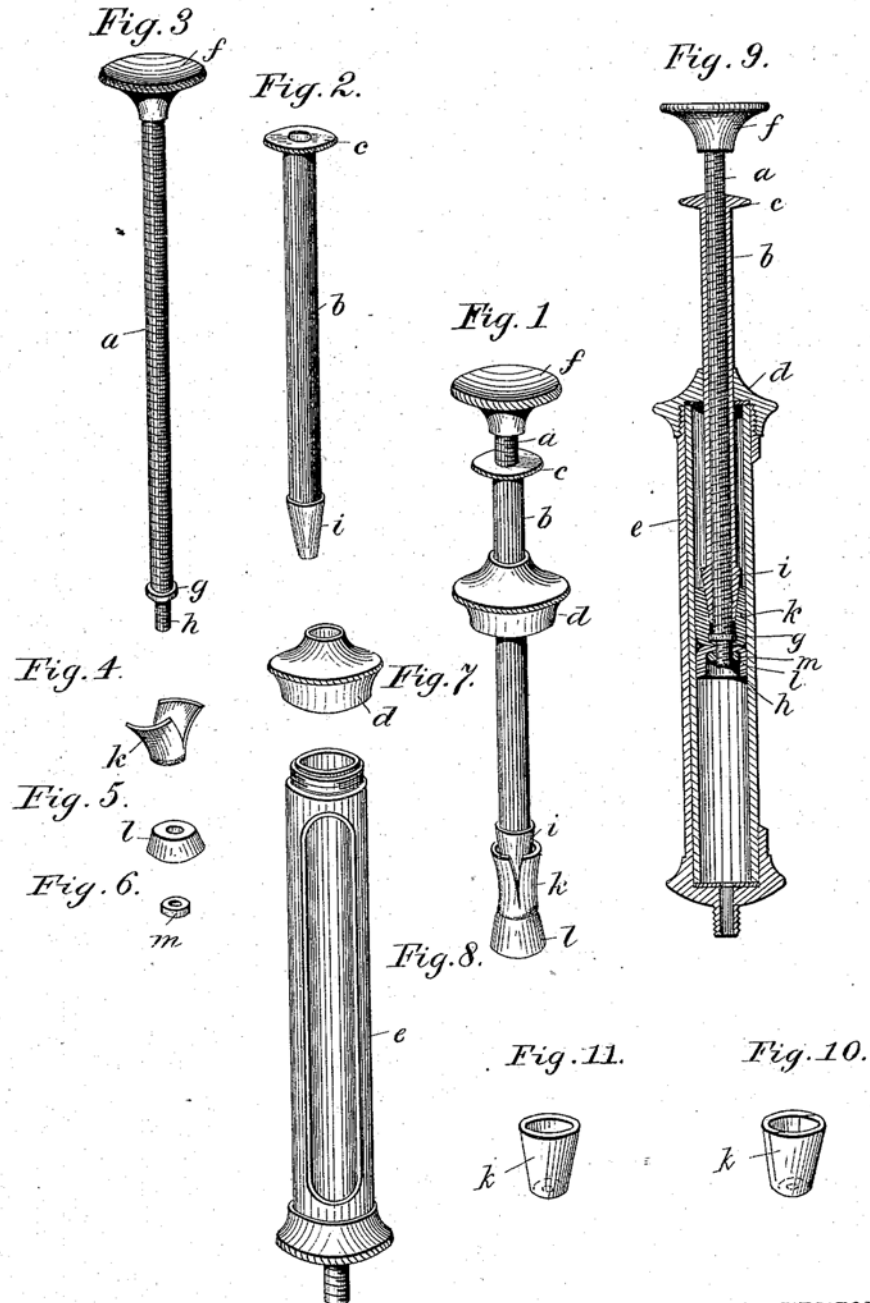
G. W. GRIM,
MEREDITH FORNEY.

(No Model.)

J. B. WORTHAM.
 SYRINGE PISTON.

No. 282,144.

Patented July 31, 1883.



WITNESSES
F. L. Curand
Geo. Finckel

INVENTOR,
John B. Wortham
 by *Wm. H. Finckel* Attorney.

Photography by John B. Wortham





J. B. WORTHAM,



WINCHESTER,
VA.



P-1832/1 Wheat, John Thomas

J. B. WORTHAM,



WINCHESTER,
VA.

The artist will please add the
surface - as he has done -
Rev Mr Clark's -