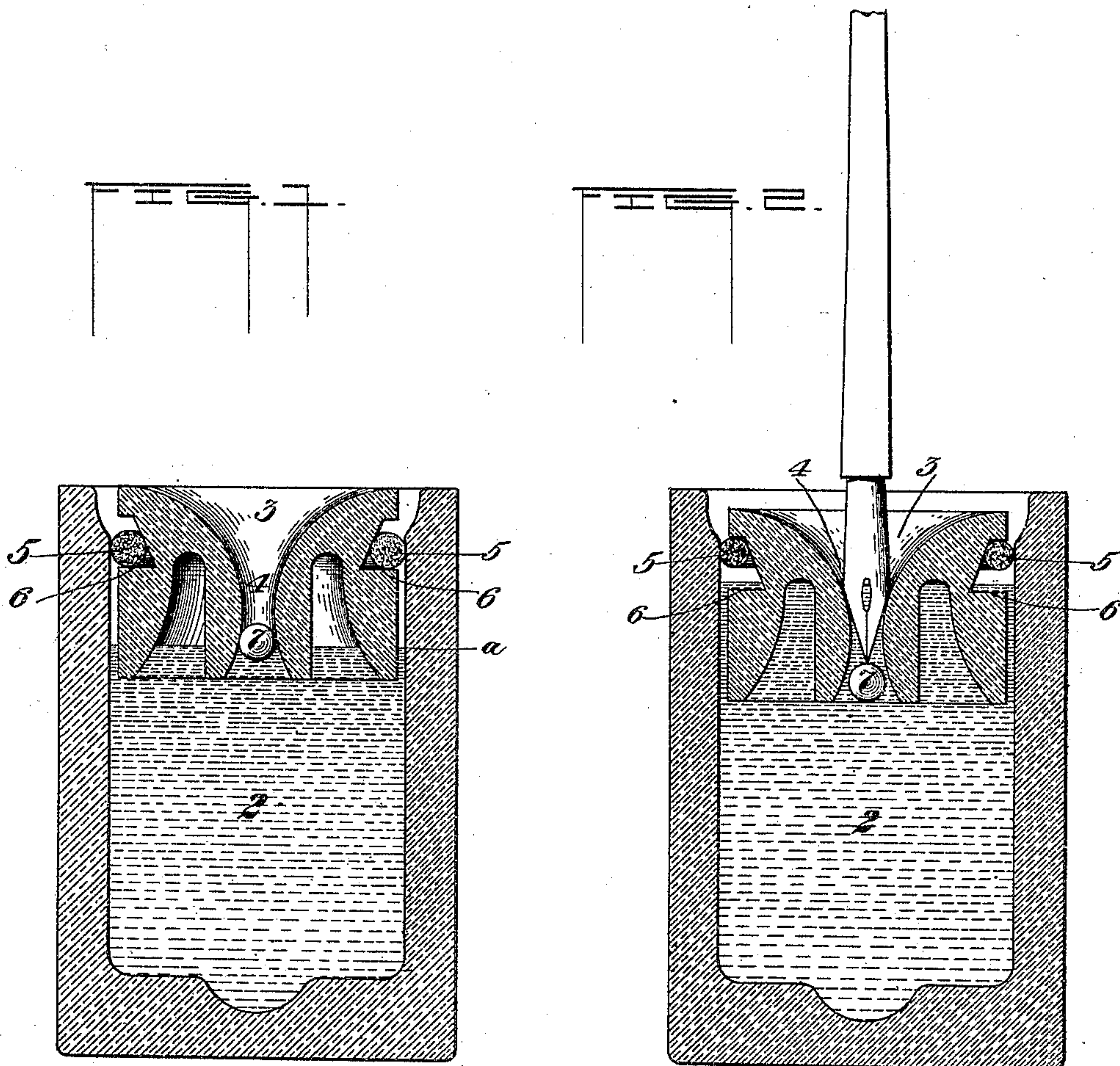


(No Model.)

C. E. BLUE.
INKSTAND.

No. 446,591.

Patented Feb. 17, 1891.



WITNESSES

W. T. Corwin
J. M. Corwin

INVENTOR

Charles E. Blue
by W. R. Riddell & Sons
his Attorneys.

UNITED STATES PATENT OFFICE.

CHARLES EDWIN BLUE, OF WELLSBURG, WEST VIRGINIA.

INKSTAND.

SPECIFICATION forming part of Letters Patent No. 446,591, dated February 17, 1891.

Application filed December 13, 1890. Serial No. 374,615. (No model.)

To all whom it may concern:

Be it known that I, CHARLES EDWIN BLUE, of Wellsburg, in the county of Brooke and State of West Virginia, have invented a new and useful Improvement in Inkstands, of which the following is a full, clear and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 shows my improved inkstand in vertical section. Fig. 2 is a similar view showing the parts in different positions.

Like symbols of reference indicate like parts in each.

My improvement relates to that class of inkstands in which the ink is fed to the pen by the pressure of air exerted on it by a movable plunger or diaphragm, which causes the ink to rise through a vertical cavity. The plunger is moved by downward pressure of the pen, and upon relief of the pressure the plunger or diaphragm rises and the ink descends into the ink-well.

The object of my invention is to simplify the construction of such inkstands, and provide an article which is cheap in cost and can be used for a long time without liability to get out of order. To this end, instead of connecting the plunger with the ink-well by a diaphragm, as in prior inkstands of this class, I fit the plunger with a surrounding ring, which closes the intervening space, but yet permits the plunger to be moved vertically to cause the rise of the ink. The preferred arrangement of the parts and their functions are hereinafter described.

In the drawings, 2 represents an ink-vessel having a cavity or well of cylindrical or other suitable form.

3 is a plunger whose exterior conforms in shape to the interior of the vessel, and which is provided with a vertical tubular cavity 4.

Around the plunger is fitted an elastic ring 5, preferably of circular cross-section, which is set in a peripheral groove 6 on the plunger, said groove being of laterally-inclined form, as shown. The parts are of such relative dimensions that the elastic ring shall seal the

space between the ink-well and the plunger substantially air-tight.

In preparing the inkstand for use the well is charged with ink, say to the level *a*, the plunger being in the position shown in Fig. 1. To use it the pen is inserted into the cavity 4 on top of the plunger and is pressed down thereon. This pressure forces the plunger down somewhat into the ink-well, and the pressure thereby created on the air in the well forces the ink up through the cavity 4 around the pen-point. In such downward motion of the plunger the ring 5 remains substantially stationary, but it is rolled and its position shifted from the lower to the upper side of the inclined groove 6. As soon as the pressure of the pen is taken from the plunger the reactive force of the elastic ring, together with the internal air-pressure in the ink-well, lifts the plunger again to its original position and causes the ink to fall again within the well. As the ink is used from the well, the plunger can be forced down to correspond in position to the level of the ink, so that the device continues to be operative until the well has been nearly exhausted.

7 is a small ball of cork or other buoyant material, which is placed in the well 2 and normally rests in the lower part of the hole 4. For lifting the plunger from the ink-well it may be provided with a suitable bail or handle.

An ink-well constructed as above described is very simple and cheap, and is not so apt to get out of order or to become clogged as prior inkstands, in which the plunger is permanently connected with the ink-well by a flexible diaphragm. It is also easy to remove and clean any of the parts whenever such cleaning may be desirable.

Modifications in the form of the parts may be made to suit the taste of the manufacturer.

I claim—

1. In an inkstand, the combination of an ink-well, a plunger movable within the well and having a vertical ink-passage, and a packing-ring encircling the plunger and bearing against the inner wall of the ink-well,

substantially as and for the purposes described.

2. In an inkstand, the combination of an ink-well, a plunger movable within the well
5 and having a vertical ink-passage, and a packing-ring encircling an inclined peripheral seat on the plunger and bearing against the inner wall of the ink-well, substantially as and for the purposes described.

In testimony whereof I have hereunto set to my hand this 5th day of December, A. D. 1890.

CHARLES EDWIN BLUE.

Witnesses:

JAS. R. PUGH,
L. V. BLUE.