July 12, 1927. 1,635,624

O. IMSET

WRITING IMPLEMENT

Filed June 26, 1925

Fig. 1

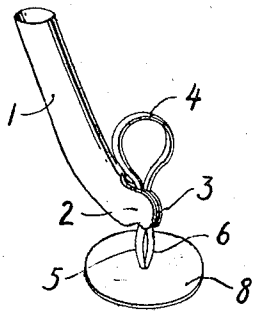


Fig. 2

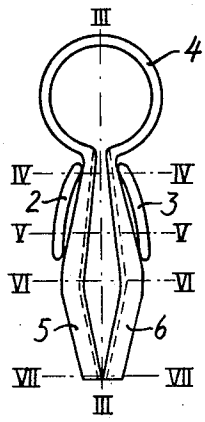


Fig. 3

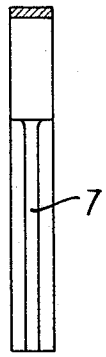


Fig. 4



Fig. 5



Fig. 6



Fig. 7



Fig. 8

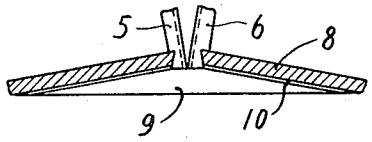


Fig. 9



Fig. 10



Fig. 11



Inventor

Otto Imset

By B. Singer, Atty.

Patented July 12, 1927. 1,635,624

UNITED STATES PATENT OFFICE.

OTTO IMSET, OF OSLO, NORWAY.

WRITING IMPLEMENT.

Application filed June 26, 1925. Serial No. 39,804.

The object of my present invention is to provide a simple and reliably operating implement intended for use in so-called technical writing, wherein it is required to obtain large characters having thick or wide strokes or lines, it being further required that the writing can take place continuously and nevertheless easy with any practical writing fluid such as ordinary ink, India ink, etc.

The difficulty in fulfilling these requirements is, as is well-known, the obtaining of a continuous and ample, but not superfluous feeding of ink to the writing pen or implement proper and a reliable distribution of same because else the strokes written will be incomplete or very imperfect, and stains or blots of ink are easily formed destroying the writing totally.

With my present implement I am able to write continuously and perfectly, even if the thickest strokes in writing are required. I can write without any difficulty letters or numerals the strokes of which have a thickness of 50 millimetre. In many cases therefore my implement may be used where it has been necessary hitherto to produce large letters by painting.

My invention is illustrated by way of example in the accompanying drawing, wherein:

Figure 1 is a perspective view of the complete implement in condition ready for use.

Figure 2 shows as an embodiment in elevation and in an enlarged scale an implement intended for use in case relatively thin lines or strokes are required.

Figure 3 is a longitudinal sectional view on the line III—III of Figure 2.

Figures 4, 5, 6 and 7 are cross sectional views of the writing bow proper on the lines IV—IV, V—V, VI—VI and VII—VII respectively.

Figure 8 is a vertical section of a distribution plate attached to the lower ends of the writing bow.

Figures 9, 10 and 11 are plan views showing different forms of the distribution plates.

As shown in Figure 1 the whole device comprises a vessel or feeding channel 1 for writing fluid such as India ink or the like, a bow 4 receiving the fluid, and a distribution plate 8 to which the fluid is conducted by the said bow.

The channel 1 forms no part of my present invention. It may be constructed in any suitable manner, it being made as a small vessel, tube or the like, and fulfilling the requirement that it is able to feed the fluid to the implement proper continuously and in quantities determined by the writing.

The principal part of my implement is constituted by the bow 4 which is constructed similar to a fork with two adjacent branches 5 and 6 forming between them a space or compartment for receiving the writing fluid and also conduits or channels for leading the fluid to the point of the branches where the fluid is readily distributed on the end faces of the branches. This bow may therefore be used in similar manner to an ordinary writing pen but of course I can obtain much coarser lines or strokes depending upon the size of the said end faces. If not too coarse, I can use the bow alone without any distributing disc or plate such as 8, and the bow therefore may in many cases constitute the complete inplement to be used in combination with the tube 1.

I have found it suitable to construct the bow with branches 5, 6 diverging from the upper handle or ring (see Figure 2) to a point nearly at the middle of said branches and then converging again towards the branch ends, whereby the inner sides of the branches are located more separated at their middle than at their ends or roots. Thereby a sort of extra vessel or compartment is formed between the bow branches securing a proper feeding of fluid to the end faces according as same passes off to the paper etc. written upon.

I prefer to make the lower end of the tube 1 with opposite yielding tongues 2, 3 between which the bow branches 5, 6 may be inserted so as to be attached to the tube merely by the spring action of said tongues suitably in combination with the spring action of the bow branches, as will be readily understood from Figures 1 and 2. I thereby regulate the distance between the branches 5, 6 by sliding the tongues 2, 3 downwardly along the bow compressing also the middle portions of said bow.

The inner longitudinal side of the bow branches may be provided with a channel as indicated at 7 in Figure 3 conducting the fluid safely down to the branch points.

In case it is required to produce very coarse strokes, I make use of the distributing disc or plate 8 shown in Figures 1 and 8. This plate is intended to be attached in

some suitable manner to the lower ends of the bow branches and to receive the writing fluid from the channels 7 and the end faces of the branches, from which the fluid is distributed on the lower surface of the plate evenly distributed all over its edge or circumference. I have obtained the best results by using an upwardly converging or conical plate as shown clearly in Figure 8, so that this plate will contact the paper written upon only along its continuous edge. When resting upon the paper this plate forms a closed compartment 9 and therefore during the writing it acts as a sucking disc taking the necessary quantity of fluid from the channels 7 by suction automatically according as it is required.

In order to facilitate the distribution of the fluid from the plate centre (channels 7) to its edge, I arrange on the under side of the plate fine-distributing grooves 10 passing from centre to edge, or a net of grooves suitably arranged as indicated in Figures 9, 10 and 11 which show also different forms of writing plates to be used especially if it is required to produce lines or strokes of different thickness in different directions. Figure 9 shows a rectangular, Figure 10 a rhomboidal and Figure 11 an elliptical plate.

The attaching of the plate 8 to the bow may take place by simply inserting the lower branch ends narrowly into the central hole of the plate which may be effected by hand. However, I prefer to utilize for this purpose the springy properties of the branches 5, 6 and of the tongues 2, 3. For instance in case of Figure 2, I insert the bow between the tongues, then slide the latter down to the middle of the bow, thereby compressing the lower branch ends tightly together, inserting the said ends easily into the plate hole and finally sliding the tongues up again, whereby the branch ends under their own spring action will move apart and be clamped sufficiently to the plate. By this arrangement the plate 8 need not be touched during the attaching or loosening of same.

In order to obtain a particularly safe attaching of the plate, especially in case of large plates I may provide the lower branch ends with outside recesses or notches the sides of which converge slightly upwardly as shown in Figure 8. For a similar purpose the branches may be displaced or bent slightly relatively to one another in the side direction (not shown). When the bow is in position between the tongues, the branches being displaced relatively to one another as just mentioned, I only have to turn the bow through 90 degrees about its longitudinal line. The branches are thereby forced by the tongues to take their parallel position, wherein their ends are easily inserted into the plate hole. If now the bow is turned slightly back the branches tend to yield back to their displaced position thereby clamping themselves to the plate. By this means I can attach or loosen the plate by merely turning the bow slightly.

Obviously many other modifications may be made without departing from the scope of my invention.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed I declare that what I claim is:—

1. As an article of manufacture, a shiftable writing implement consisting of a separate and thin plate having a central hole adapted to fit releasably to a combined holder and writing fluid supplier and to feed writing fluid to the plate underside and circumferential edge.

2. As an article of manufacture, a writing implement consisting of a separate and thin plate having a circumferential edge continuous all around and a central hole adapted to fit releasably to a combined writing-fluid supplier and holder and to feed such fluid to the plate underside and continuous edge.

3. A writing implement consisting of a combined holder and writing fluid supplier, and a separate thin plate having a central hole adapted to fit releasably to said lower end of said supplier and to feed the supplied fluid to its underside and edge.

4. As an article of manufacture a writing implement consisting of a separate and thin plate having a central perforation adapted to fit releasably to a combined holder and writing fluid supplier and having an all round continuous circumferential edge and an underside tapering upwardly from the said edge to the central hole so as to feed fluid from the center to said continuous edge.

5. A writing implement consisting of a bow having nearly parallel branches forming between them a narrow space for feeding writing fluid to the branch ends in combination with a plate having in its centre a hole for feeding writing fluid to its underside and edge said hole being dimensioned so as to take up the branch ends and thereby be attached to the same.

6. A writing implement consisting of a springy bow having nearly parallel branches spaced slightly apart by the spring action and forming between them a narrow space for feeding writing fluid to the branch ends in combination with a plate having in its centre a hole for feeding writing fluid to its underside and edge said hole being dimensioned so as to take up the branch ends and thereby be attached to the same.

7. A writing implement, consisting of a bow having nearly parallel branches forming between them a narrow space for feeding writing fluid to the branch ends in combination with an upwardly converging plate

with a continuous edge and a central hole for feeding writing fluid to its underside and edge said hole being dimensioned so as to take up the branch ends and thereby be attached to the same.

8. A writing implement, consisting of a springy bow having nearly parallel branches spaced slightly apart by the spring action and forming between them a narrow space for feeding writing fluid to the branch ends in combination with an upwardly converging plate with a continuous edge and a central hole for feeding writing fluid to its underside and edge said hole being dimensioned so as to take up the branch ends and thereby be attached to the same.

9. A writing implement, consisting of a bow having nearly parallel branches forming between them a narrow space for feeding writing fluid to the branch ends in combination with a plate having in its centre a hole for feeding writing fluid to its underside and edge the lower end portions of the branches having slightly upwardly converging outer sides cooperating with the central hole of the plate for the purpose of clamping fast said plate to the branches.

10. A writing implement, consisting of a springy bow having nearly parallel branches spaced slightly apart by the spring action and forming between them a narrow space for feeding writing fluid to the branch ends in combination with a plate having in its centre a hole for feeding writing fluid to its underside and edge the lower end portions of the branches having slightly upwardly converging outer sides cooperating with the central hole of the plate for the purpose of clamping fast said plate to the branches.

11. A writing implement, consisting of a bow having nearly parallel branches forming between them a narrow space for feeding writing fluid to the branch ends an upwardly converging plate with a continuous edge and a central hole for feeding writing fluid to its underside and edge the lower end portions of the branches having slightly upwardly converging outer sides cooperating with the central hole of the plate for the purpose of clamping fast said plate to the branches.

12. A writing implement, consisting of a springy bow having nearly parallel branches spaced slightly apart by the spring action and forming between them a narrow space for feeding writing fluid to the branch ends an upwardly converging plate with a continuous edge and a central hole for feeding writing fluid to its underside and edge the lower end portions of the branches having slightly upwardly converging outer sides cooperating with the central hole of the plate for the purpose of clamping fast said plate to the branches.

13. As an article of manufacture a writing implement consisting of a separate and thin plate having a central perforation adapted to fit releasably to a combined holder and writing fluid supplier and having an all round continuous circumferential edge and an underside provided with grooves for distributing the fluid from center to edge.

In witness whereof I affix my signature.

OTTO IMSET.