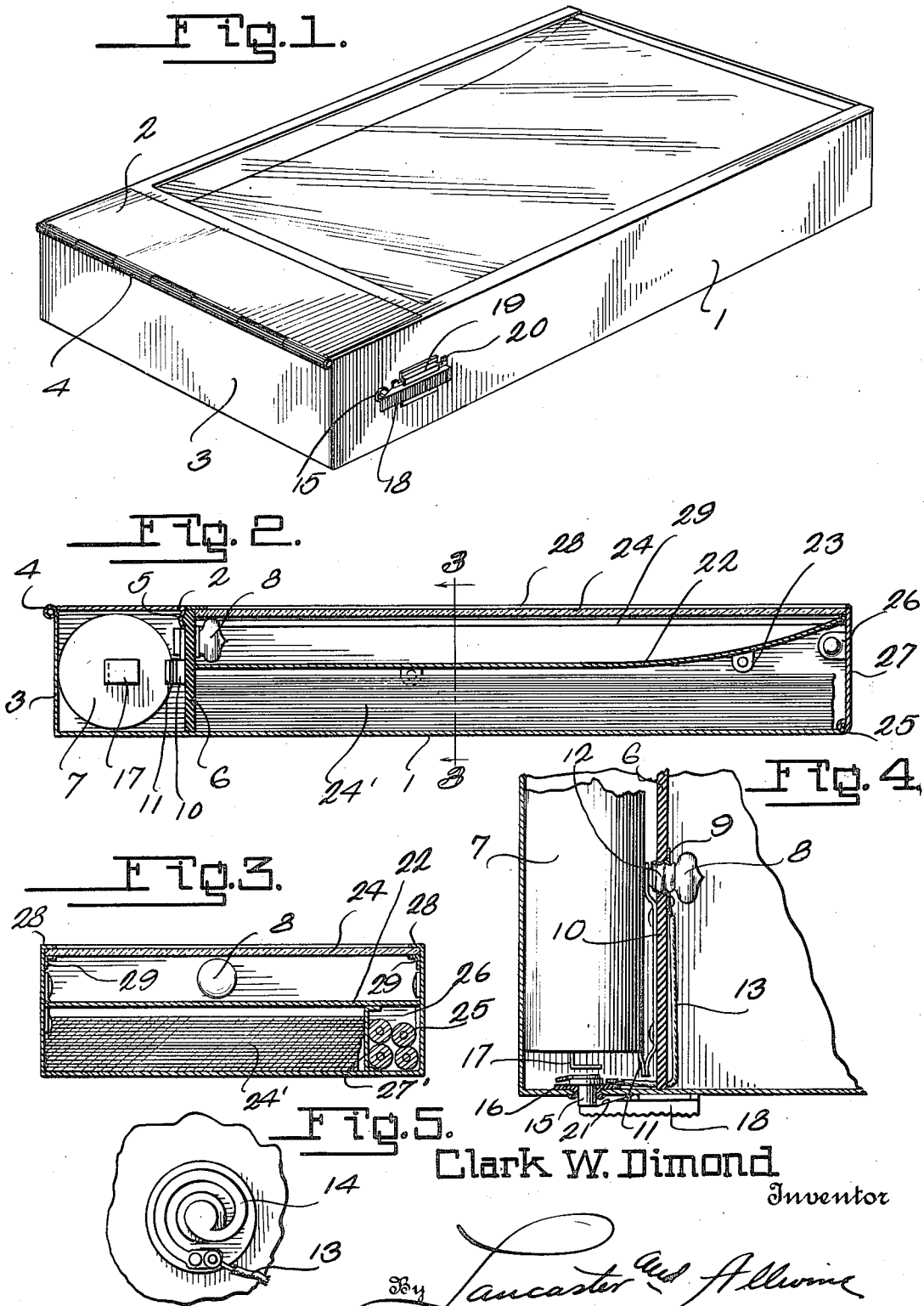


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 PORTABLE ILLUMINATED SKETCHING OR WRITING SERVICE.
 APPLICATION FILED OCT. 17, 1918.

1,320,537.

Patented Nov. 4, 1919.
 2 SHEETS—SHEET 1.



Clark W. Dimond

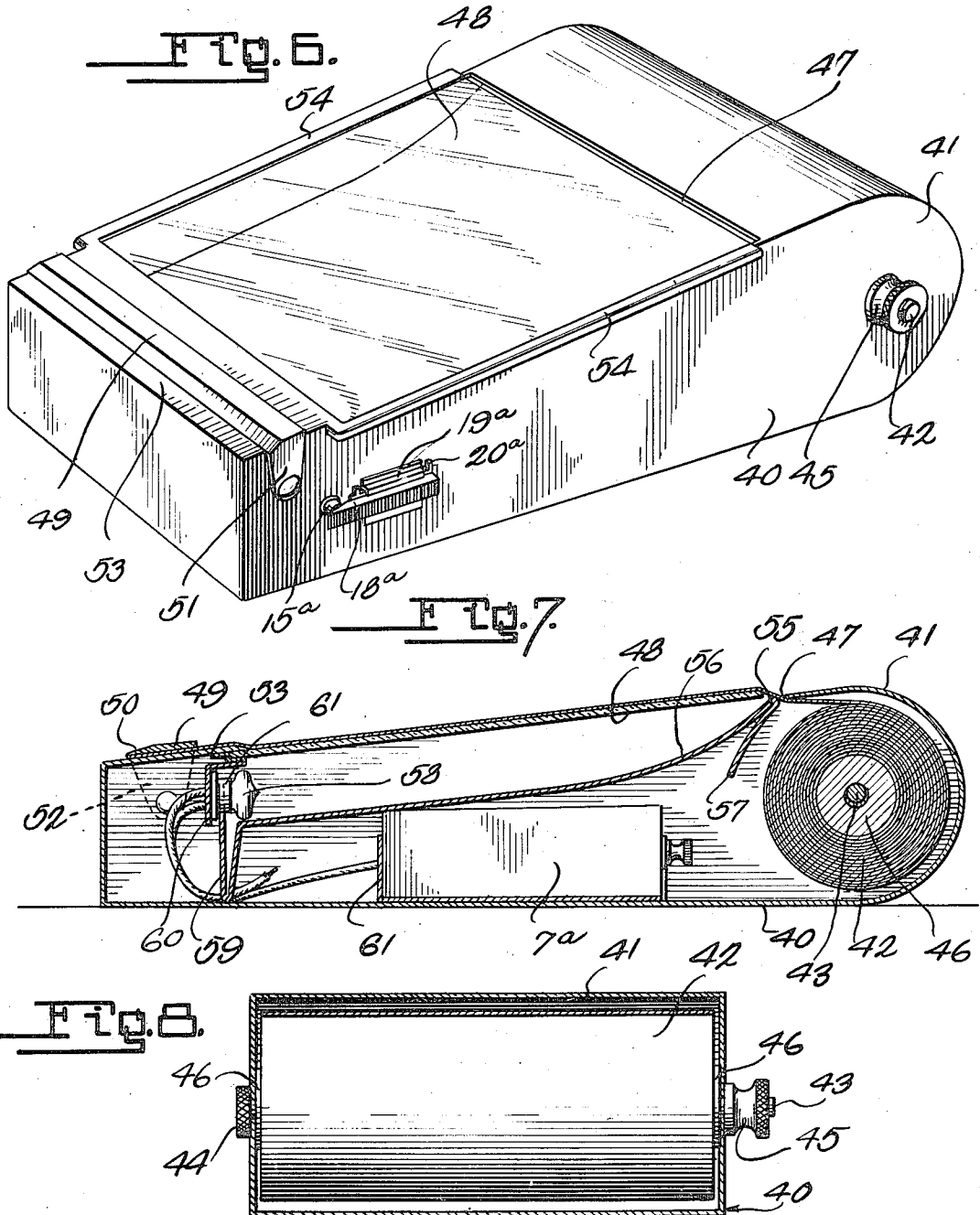
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UNITED STATES PATENT OFFICE.

CLARK W. DIMOND, OF WASHINGTON, DISTRICT OF COLUMBIA.

PORTABLE ILLUMINATED SKETCHING OR WRITING SERVICE.

1,320,537.

Specification of Letters Patent.

Patented Nov. 4, 1919.

Application filed October 17, 1918. Serial No. 258,558.

To all whom it may concern:

Be it known that I, CLARK W. DIMOND, a citizen of the United States, and a resident of Washington, in the District of Columbia, have invented a certain new and useful Improvement in Portable Illuminated Sketching or Writing Service, of which the following is a specification.

This invention relates to a sketching or writing service, an object of the invention being to provide a portable device having a flat desk or writing surface which is preferably formed by a plate of glass, removably carried by a suitable casing or housing in which is positioned a reflector which curves upwardly toward the said plate at one end of the housing for diffusing the light rays from an ordinary incandescent light or lamp bulb carried by the housing at the end remote from the curved end of the reflector, and also to provide, within the housing, means for energizing or exciting the said lamp bulb, and further to provide compartments in the housing for retaining paper or sketching material to which access may be conveniently had.

Often times, a person desires to make a visible record of his thoughts, at times when writing or sketching material is inconvenient or when the light is insufficient to permit legible or comprehensive work, and it is an object of this invention to provide an illuminated sketching or writing service which may be always convenient at hand, and which will illuminate the paper being sketched or written upon by the diffusion of light rays therethrough from the transparent writing surface.

Other objects of the invention will appear in the following detailed description, taken in connection with the accompanying drawings, forming a part of this specification and in which drawings:

Figure 1 is a perspective view of the improved portable illuminated sketch or writing service.

Fig. 2 is a longitudinal section through the same.

Fig. 3 is a cross section on the line 3—3 of Fig. 2.

Fig. 4 is a fragmentary horizontal section through the service illustrating the

switch connection between the lamp bulb and its energizing battery.

Fig. 5 is a detail side elevation in part of the switch structure controlling the energizing or exciting of the lamp bulb.

Fig. 6 is a perspective view of a modified form of the sketching or writing service.

Fig. 7 is a longitudinal section through the modified form of the sketching or writing service, and

Fig. 8 is a cross section through the modified form of the sketching or writing service.

Referring more particularly to the drawings, wherein like characters indicate like and corresponding parts, throughout the several views, 1 indicates the casing or body of the service, which is preferably formed of sheet metal or similar light material and of such shape and size as to conveniently fit within the pocket of the user, so that he may always have it convenient for use. The casing 1 has a top 2 which is hingedly connected to the upstanding end 3 of the casing as shown at 4 and this top is held in closed position, against accidental pivotal movement by a catch structure illustrated at 5 which includes depending ears having concavities therein for receiving lugs or out-standing portions formed upon the front surface of the partition 6 near the upper end of the same. This partition 6 extends transversely across the interior of the casing 1 near the end 3 thereof, forming a compartment which retains the battery or exciter 7 of the incident lamp bulb 8. The lamp bulb 8 is carried by a socket 9 which is in turn supported by the partition 6, substantially equidistant of its ends and near its upper edge. The central contact of the bulb 8 is connected, by means of a spring strip or contact member 10 to the side contact 11 of the battery 7 while the outer contact or casing 12 of the bulb is connected by means of an ordinary wire 13 to a switch mechanism comprising flat coil springs 14 the normal tendency of which is to flatten. This spring 14 carries a pin 15 which projects through a suitable insulating collar 16 in one side of the casing 1 and is depressed or forced inwardly for moving the free end of the spring 14 into engagement with the central contact 17 of the battery 7 by a slid-

able switch member 18. The switch member 18 is slidably supported exteriorly of the casing 1 by suitable guides 19 and it carries outstanding lugs 20 for limiting its slidable movement. The sliding switch closer 18 has a beveled surface 21 for riding over the outer end of the pin 15 and gradually forcing the pin inwardly to move the free end of the spring 14 into engagement with the contact 17.

A reflector plate 22 is positioned within the casing 1, being attached to the sides of the casing by suitable depending ears 23. This reflector plate 22 may have its upper surface enameled in white, if desired, or it may be highly polished to assist in diffusion of the light rays from the bulb 8. The reflector 22 extends substantially horizontal through the casing 1 from the partition 6 to the opposite end of the casing, said reflector being gradually curved upwardly toward the transparent plate 24 as it approaches the end of the casing remote from partition 6 and as clearly shown in Fig. 2 of the drawings, assisting in guiding the light rays upwardly through the transparent plate 24 which may be of ground glass and which forms the writing or sketching surface of the device upon which the paper is placed during the writing or sketching thereon. The portions of the interior of the casing 1 below the reflector 22 forms a compartment for containing the piece of paper indicated at 24 and the end of the compartment remote from the partition 6 is hingedly connected to the bottom of the casing as shown at 25, and it carries snap fastening devices or catches 26 which are constructed identically with the catch structure 5 for holding the end 27 in opposed position. The curving upwardly of the outer end of the reflector 22 serves the dual function of guiding the light rays upwardly through the transparent plate 24 and it also permits the insertion of one's fingers into the compartment below the reflector for facilitating the removal of a sheet of paper therefrom or one of the pencils indicated at 25 which are retained in the compartment 26 separated from the paper containing compartment by a partition 27.

In use; the door 27 is open, and a sheet of paper is withdrawn from this compartment and a pencil, pen or the like is withdrawn from the compartment 26, and the sheet of paper is placed upon the transparent plate 24, after which the slidable contact or surface closing member 18 is moved for forcing the spring contact 14 into engagement with the contact 17 which will cause the energizing or exciting of the bulb 8, the light rays of which will be reflected upwardly through the transparent plate 24, by the deflector or reflector 22. It will be noted, by particular reference to Fig. 2 of

the drawings that the plate 24 is prevented from sliding longitudinally in its guide 28 by the upper edge of the door 27 when the latter is closed, thus when the door 27 is opened, the transparent plate 24 may be spread or moved out of its guiding flanges 28 if desired. The plate 24 is rigidly held, from downward movement by the angled strips 29 which coact with the flanges 28 in supporting the plate 24.

In Figs. 6, 7 and 8, the modified form of the sketching or writing service is illustrated. This form is particularly designed to be made in a larger size than the preferred form illustrated in Figs. 1 to 5 inclusive which preferred form is particularly designed to be carried about in the pocket of the user.

The modified form of the sketching or writing service includes a casing 40 formed of sheet metal or analogous material which has one end rounded as shown at 41 and this rounded end houses a roll 42 of paper upon which the sketches or notation may be made. The roll 42 is rotatably supported upon a pin 43 which extends through the alining openings in the sides of the housing 40. A head 44 is formed upon end of the rod 43 and a nut 45 is threadably mounted upon the other end so that the sides of the housing 40 may be compressed or forced inwardly into engagement with the ends of the core 46 of the roll 42 for breaking the rotation of the roll and consequently retarding the unwinding of the strip of paper therefrom. The paper, as it passes from the roll 42 passes through a flap 47 in the housing 40 and over the upper surface of the transparent plate 48, and beneath a binder 49. The binder 49 comprises a flat bar having its outer edge beveled as shown at 50 for providing an edge over which the paper may be torn. The ends of the bar of the binder are bent downwardly as shown at 51 and pivotally connected to the sides of the housing 40 so that when an upward pull is administered to the paper extending beyond the binder 49 the binder will be rocked upon its pivot causing its inner or uppermost edge to clamp against the strip of paper clamping the same between the upper edge of the binder and the top 53 of the housing 40, securely holding the paper while the same is torn along the beveled edge of the strip or bar.

The top 53 is cut away and it is extended laterally upon each side of the casing 40 to provide guideways 54 which receive and support the riding surface or plate 48. This transparent plate 48 is preferably formed of ground glass. The guide ways 54 open out at their ends which are adjacent to the rounded ends 41 of the housing or casing 40 so as to permit the glass or plate 48 to be removed if desired.

The paper, passing from the roll 42 through the opening or slit 47 passes over the rounded end or edge portion 55 of the deflector 56 which rounded edge is formed at the upper terminal of the upwardly curved portion of the reflector, by the downwardly bending rearwardly curving of the terminal 57 of the reflector. The reflector 56 is formed of sheet metal and it may have its upper surface enameled or otherwise prepared to facilitate in the diffusion of the light rays from the lamp 58 evenly through the transparent plate 48 and the paper which is passed thereover. The reflector plate 56 is bent downwardly and upwardly forming a substantially V-shaped portion 59 which engages the bottom of the casing 40 and against the depending plate 60 which carries the socket 61 in which the lamp bulb 58 is mounted. The outermost upstanding side of the V-shaped portion 59 may be provided with a cut-out portion to engage about the socket 61.

The energizing of the lamp bulb 58 is controlled through a switch structure identical with the switch structure described in the preferred form of the invention, namely one embodying a pin 15^a which is forced inwardly by the sliding movement of a slidable member 18^a to close the circuit from the battery 7^a through the socket 61 and the bulb 58. The sliding contact operating member 18^a is identical with the construction of the member 18 being slidably supported on one side of the housing 40 by guide members 19^a and limited in its slidable movement by lugs 20^a carried thereby for engagement with the ends of one of the guides 19^a. The battery 7^a which may be of any conventional type is carried within the housing or casing 40 beneath the reflector plate 56, being seated in a suitable battery container 61 which prevents sliding movement of the battery during the movement of the improved sketching or writing service. It will be noted by reference to Fig. 7 of the drawings, that the curved portion of the reflector 56 is removed from the light bulb 58 and that it will engage the light rays passing directly from the bulb longitudinally of the sides and deflect them upwardly through the transparent plate 48 for rendering the paper passed thereover clearly visible and assisting the person using the device in writing or sketching, in dark places. It will also be appreciated that the device may be employed for copying or tracing sketches, drawings or the like, this being accomplished by the inserting of the sketch or drawing to be traced between the paper which passes over the plate 48 and the plate, allowing the light rays to penetrate the sketch or drawing to be copied, the plate 48 and the portion of paper from the roll 65 which passes over the drawing, thereby ren-

dering the lines of the drawing visible through the top paper.

Changes in details may be made without departing from the spirit of this invention, but;

I claim:

1. In a portable illuminated sketching or writing service, the combination of a portable casing, a transparent plate carried by the casing, a partition in said casing at one end of said transparent plate, a light carried by said partition, and a reflector within said casing for deflecting the light rays from said light through said transparent plate.

2. In a portable illuminated sketching or writing service, the combination of a portable casing, a transparent plate carried by the casing, a partition in said casing at one end of said transparent plate, a light carried by said partition, and a reflector within said casing, said reflector curving concavely toward said transparent plate for deflecting the light rays from said light through said transparent plate.

3. In a portable illuminated sketching or writing service, the combination of a transparent plate, a partition in said casing at one end of said transparent plate, a lamp carried by said partition, a reflector beneath said plate and extending straight away from the lamp for a portion of its length and concavely curving upwardly toward said plate at its end portion remote from said lamp.

4. In a portable illuminated sketching or writing service, the combination of a portable casing, a transparent plate removably carried by said casing, a partition within the casing at one end thereof, a lamp carried by said partition, means for energizing said lamp carried within the portion of the casing divided off by said partition, a contact carried by said partition and establishing energizing connection between the lamp and the energizing means, and a switch mechanism carried by said casing for controlling the energizing of the lamp.

5. In a portable illuminated sketching or writing service, the combination of a portable casing, guideways formed on said casing, a transparent plate removably carried by said guideways, a partition at one end of said casing, a lamp carried by said partition, a reflector beneath the said plate and extending straight away from the lamp for a portion of its length and concavely curving upwardly toward said plate at its end portion remote from said lamp, means for energizing said light carried within said casing within the portion divided off by said partition, and a switch mechanism carried by said casing for controlling the energizing of the lamp.

6. In a portable illuminated sketching or writing service, the combination of a portable casing, a transparent plate removably

carried by said casing, a partition within the casing at one end thereof, a lamp carried by said partition, means for energizing said lamp carried within the portion of the casing divided off by said partition, a contact
5 carried by said partition and establishing energizing connection between the lamp and the energizing means, and a switch mechanism carried by said casing for controlling the energizing of the lamp, a reflector within
10 said casing beneath said transparent plate and extending straight away from the lamp carrying partition or a portion of its length and concavely curving upwardly toward said transparent plate at its end portion remote
15 from the lamp.

7. In a portable illuminated sketching or writing service, the combination, of a pocket size portable casing, a transparent plate removably carried by one face of said casing,
20 a partition extending transversely through the casing, a lamp carried by said partition, a reflector beneath said plate and extending straight away from said partition for a portion of its length and concavely curving upwardly toward the plate at its end portion
25 remote from said lamp.

8. In a portable illuminated sketching or writing service, the combination, of a pocket size portable casing, a transparent plate removably carried by one face of said casing,
30 a partition extending transversely through the casing, a lamp carried by said partition, a reflector beneath said plate and extending straight away from said partition for a portion of its length and concavely curving upwardly toward the plate at its end portion
35 remote from said lamp, the end of said casing remote from said partition being hingedly connected to the main body of the casing and forming means to prevent accidental disconnection between said transparent
40 plate and casing, when the end is in its closed position.

9. In a portable illuminating sketching or writing service, the combination of a casing, a transparent plate carried at one side of said casing, a lamp within said casing, a reflector plate carried within said casing beneath said transparent plate, one end of said
50 casing being hingedly connected to the casing to permit access to the interior thereof, guides formed upon said casing and slidably supporting said transparent plate, said hinged end engaging one end of the transparent plate and preventing sliding
55 movement thereof when the end is in a closed position.

10. In a portable illuminated sketching or writing service, the combination of a portable casing, a transparent plate carried at one side of said casing, a lamp within said casing, a reflector plate carried within the casing beneath said transparent plate and
60 extending straight away from the lamp for

a portion of its length and concavely curving upwardly toward said plate at its end portion remote from the lamp, the end of said casing adjacent the curved portion of said reflector being hingedly connected to the casing to permit access to the interior of the casing below said reflector, the interior of said casing below said reflector forming a magazine for retaining sheets of paper, guides formed upon said casing and slidably
75 supporting said transparent plate, said hinged end engaging one end of the transparent plate and preventing sliding movement thereof when the end is in a closed position.

11. In a portable illuminated sketching or writing service, the combination of a portable casing, a transparent plate carried at one side of said casing, a lamp within said casing, a reflector plate carried within the casing beneath said transparent plate and extending straight away from the lamp for a portion of its length and concavely curving upwardly toward said plate at its end portion remote from the lamp, the end of said casing adjacent the curved portion of said reflector being hingedly connected to the casing to permit access to the interior of the casing below said reflector, the interior of said casing below said reflector forming a magazine for retaining sheets of paper, guides formed upon said casing and slidably supporting said transparent plate, said hinged end engaging one end of the transparent plate and preventing sliding movement thereof when the end is in a closed position, means for energizing said lamp, and a switch mechanism carried by said casing for controlling the energizing of the lamp.

12. In a portable illuminated sketching or writing service, the combination, of a casing, guide ways formed on said casing, a transparent plate removably carried by said guide ways, a lamp, a reflector beneath said plate and extending straight away from the lamp for a portion of its length, and concavely curving upwardly toward said plate at its end portion remote from said lamp, a vertical longitudinally extending partition within said casing dividing the space beneath said reflector into a relatively large compartment, and a relatively small compartment, the end of said casing adjacent the curved portion of said reflector being hingedly connected to the casing to permit access to said compartment.

13. In a portable illuminated sketching or writing service, the combination, of a casing, guide ways formed on said casing, a transparent plate removably carried by said guide ways, a lamp, a reflector beneath said plate and extending straight away from the lamp for a portion of its length, and concavely curving upwardly toward said plate at its end portion remote from said lamp, a ver-
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tical longitudinally extending partition within said casing dividing the space beneath said reflector into a relatively large compartment, and a relatively small compartment, the end of said casing adjacent the curved portion of said reflector being hingedly connected to the casing to permit access to said compartment, said hinged end engaging one end of said transparent plate and preventing sliding movement thereof, when the end is in a closed position, and means for normally maintaining said end in a closed position.

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