Nov. 22, 1966 A. W. SPEDDING 3,287,547

ILLUMINATED TWEEZER

Filed June 10, 1964

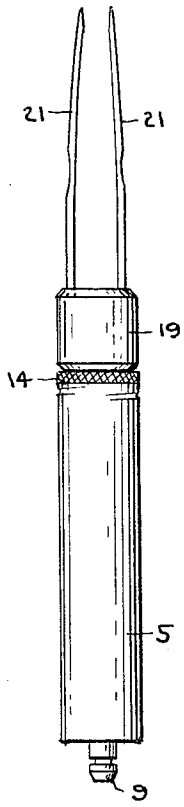


Fig. 1.

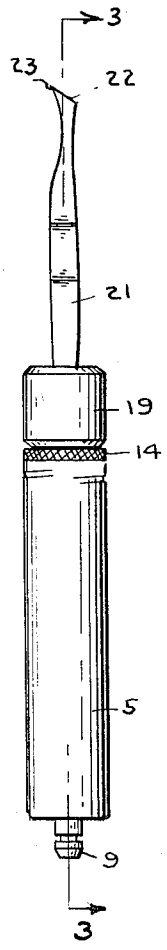


Fig. 2.

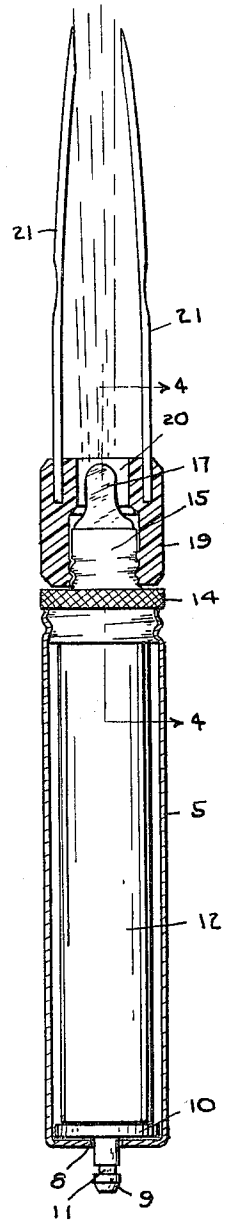


Fig. 3.

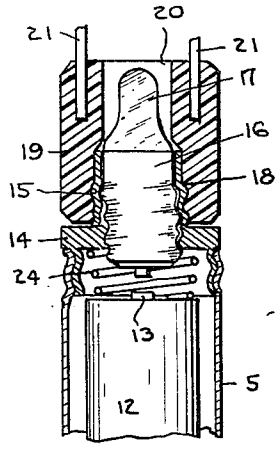


Fig. 4.

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ILLUMINATED TWEEZER

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1 Claim. (Cl. 240—6.46)

This invention relates to an illuminated tweezer or like instrument for the handling of relatively minute objects.

The invention contemplates a tweezer having a pair of flexible prongs terminating in spaced apart points and with the prongs being shifted together by the fingers of the operator and with the prongs being fixed into a non-conducting molded sleeve that is axially apertured and threaded for the reception of a lamp carrying element and whereby the lamp carrying element projects a beam of light downwardly or upwardly, as the case may be to the area of the points of the prongs and with the battery carrying means having a switch for energizing the lamps.

Novel features of construction and operation of the device will be more clearly apparent during the course of the following description, reference being had to the accompanying drawings wherein has been illustrated a preferred form of the device and wherein like characters of reference are employed to denote like parts throughout the several figures.

In the drawings:

FIGURE 1 is a side elevation of a device constructed in accordance with the invention,

FIGURE 2 is a side elevation at a right angle to FIGURE 1,

FIGURE 3 is a central vertical section taken substantially on line 3—3 of FIGURE 2, and

FIGURE 4 is an enlarged fragmentary sectional view taken substantially on line 4—4 of FIGURE 3.

Referring specifically to the drawings, there has been illustrated an elongated cylindrical barrel **5**. The barrel may be formed of metal or plastic as may be found desirable. The barrel **5** is open at its upper end and internally threaded at **6** and the lower end of the barrel is closed by a wall **7**, that is apertured at **8** to receive a lower projecting button **9** carried by a disk **10** normally seating upon the bottom of the barrel. The button **9** is circumferentially grooved at **11** so that the disk **10** may be forced upwardly and locked into a position to energize the lamp, to be described. Disposed within the barrel **5** are one or more batteries **12**, with the uppermost end of the batteries having a positive terminal **13**.

Connected to the barrel **5** is a coupling, including a knurled ring **14**, threaded to engage the threads **6** of the barrel. The ring **14** is stamped or otherwise formed to provide an upstanding axially arranged tubular threaded extension **15** in which is threadedly engaged the ferrule **16** of a lamp **17**. The threaded extension **15** is threaded into a lower threaded aperture **18** of a non-metallic sleeve **19**. The sleeve **19** is apertured at **20** to receive the threaded extension **15** and the lamp **17** and whereby the lamp is axially disposed with respect to the sleeve **19**.

Anchored or otherwise molded into the sleeve **19**, is a pair of spaced apart flexible and preferably metallic prongs **21**. The prongs **21** are shaped in accordance with the generally recognized form of tweezer prongs that are curved intermediate their lengths and having their end portions formed diagonal as at **22**, forming points **23**. The prongs **21** are adapted to be biased together by pressure upon the sides of each prong whereby the points

23 are adapted to grip relatively small objects and the lamp **17** projects light downwardly or upwardly toward the prong points.

Disposed between the top of the batteries **12** and the coupling **14**, is a coil spring **24**. The coil spring **24** normally biases the battery or batteries downwardly toward the disk **10** and to a position where the positive contact **13** is spaced from the terminal of the lamp ferrule **16** and whereby to deenergize the lamp **17**, when the device is in an inoperative position.

In the use of the device, one or more batteries **12** are inserted into the open upper end of the barrel **5**, to rest upon the disk **10**. When the tweezer is adapted to be employed to pickup or grasp relatively small objects and assuming, that the objects are not clearly defined, the button **9** is shifted upwardly to cause the disk **10** to force the battery or batteries **12** upwardly to make contact with the central terminal of the lamp ferrule **16** and against the tension of the spring **24**. With the button **9** constituting the operating means for the lamp, light will be projected from the lamp toward the points **23** of the prongs **21** so that illumination will be provided and to facilitate the pick-up of the objects by squeezing the prongs **21** together. The button **9** may be only pressed upwardly sufficiently to energize the lamp or it may be forced entirely upwardly and locked into the energizing position by the groove **11**, that is shifted laterally to engage the marginal portion of the aperture **8** thus maintaining the lamp constantly energized for a relatively prolonged service.

It will be apparent from the foregoing that a very novel arrangement of illuminated tweezers has been provided, the structure is simple, strong, durable and cheap to manufacture and provides a very novel form of tweezer having illuminating means.

It is to be understood that the invention is not limited to the precise construction shown, but that changes are contemplated as readily fall within the spirit of the invention as shall be determined by the scope of the subjoined claim.

I claim:

An illuminated tweezer having a handle forming barrel open at its upper end and threaded, a coupling device having a lower extension that is threaded to engage the threads of the barrel, the coupling also having an upwardly extended cylindrically and threadedly formed socket for receiving a threaded ferrule of an incandescent lamp, a non-metallic sleeve having an axial opening throughout and with the lower end of the opening threaded to receive the threaded socket, a pair of opposed flexible prongs molded into the top of the sleeve and with the terminal ends of the prong being in normally spaced relation and biased together by pressure exerted upon the outer sides of the prongs, means in the barrel for energizing the lamp and whereby the lamp when energized will project a light beam between the prongs and to illuminate an area at the terminal ends of the prongs, the sleeve and its axial opening and the threads of the opening and the lower ends of the prongs being simultaneously molded, the coupling device being stamped from metal and having a circumferentially knurled ring carrying the upwardly extended threaded socket and the lower threaded extension, the barrel forming housing for electrical batteries, the bottom of the barrel being apertured to receive an outwardly extending button that is fixed to a disk in the barrel and

with the disk normally resting upon the bottom of the barrel, a coil spring seated into the coupling and bearing upon the positive end of the batteries and to bias the batteries downwardly toward the disk and away from an axial terminal of the lamp, the button projecting downwardly from the barrel through the aperture, the button being cylindrical, and circumferentially grooved so that the button when forced inwardly with the disk may be shifted laterally to engage the groove at a marginal edge of the aperture, the movement of the button inwardly, simultaneously shifting the batteries upwardly to engage the contact of the lamp.

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