No. 883,702. PATENTED APR. 7, 1908.

J. W. ELLISON.

SHOVEL.

APPLICATION FILED APR. 13, 1904.

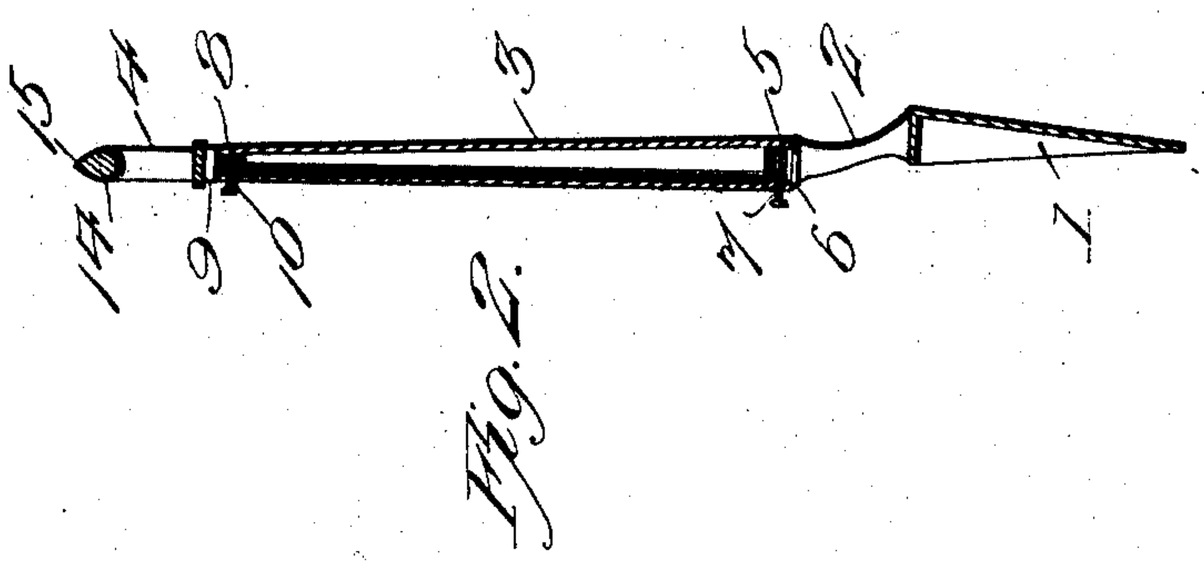

Fig. 2.

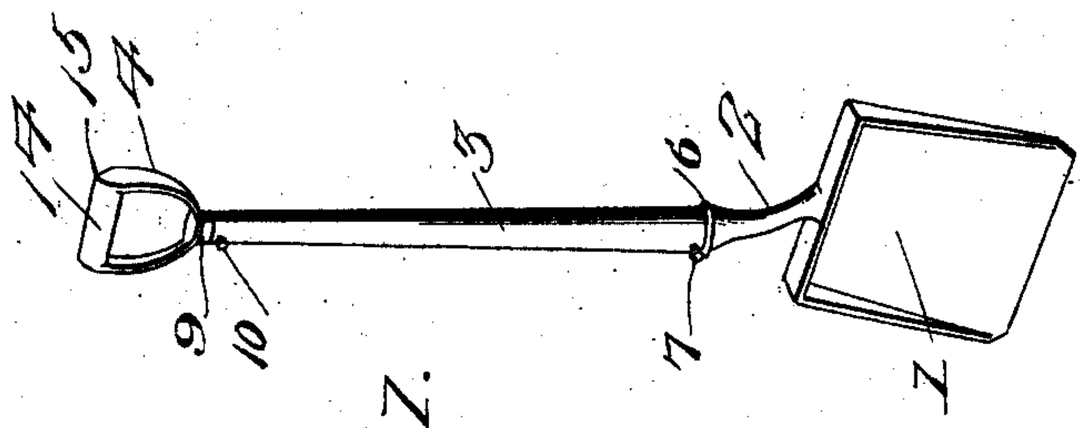

Fig. 1.

Witnesses
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UNITED STATES PATENT OFFICE.

JOHN WESLEY ELLISON, OF COMSTOCK, TEXAS.

SHOVEL.

No. 883,702. Specification of Letters Patent. Patented April 7, 1908.

Application filed April 13, 1904. Serial No. 202,981.

To all whom it may concern:

Be it known that I, JOHN WESLEY ELLISON, a citizen of the United States, residing at Comstock, in the county of Valverde and State of Texas, have invented new and useful Improvements in Shovels, of which the following is a specification.

My invention has relation to shovels and is designed as an improvement on Letters Patent #701,805, granted to me June 3, 1902, and my present invention consists in the construction and arrangement of parts as will be hereinafter described and particularly pointed out in the claim.

In the drawings, Figure 1 is a perspective view of a shovel embodying the features of the invention. Fig. 2 is a transverse vertical section through the blade, handle and handhold.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numeral 1 designates a blade having a goose-neck 2 to which is secured a tubular stock or standard 3 provided at its upper terminal with a handle 4. All of the parts just set forth are similar in the two forms of the device, the difference in construction residing in the mode of attaching the standard 3 to the goose-neck 2 and handle 4. The goose-neck and blade may be formed from a single solid piece of steel, or said goose-neck may be welded to the blade. The upper terminal of the goose-neck, as shown by Figs. 1 and 2, is formed with a central solid screw plug or stem 5 at the base of which is a circumferential shoulder 6.

The interior of the lower end of the standard 3 is screw-threaded to fit over or receive the plug or stem 5 and a set-screw 7 is inserted through the said lower end of the standard and against the threads of the plug or stem to prevent retrograde movement and accidental loosening of the neck and standard. The lower end of the standard 3 is flush with the outer edge of the shoulder 6 to avoid the formation of a disadvantageous projection at the upper terminal of the goose-neck. The standard 3 may be of any suitable length and is gradually tapered or reduced towards its upper end, the latter being also internally-screw-threaded to receive a solid screw-plug or stem 8 depending from the center of the handle 4. The upper end of the standard 3 is fitted flushly against the circumferential shoulder 9 at the upper terminal of the solid plug or stem 8 and to complete the attachment of the handle a set-screw 10 is used, which impinges against the threads of the stem 8 and similarly prevents retrograde movement of the handle and liability of the same becoming loosened or detached from the standard. It will thus be observed that both the gooseneck or shank 2 of the blade 1 and the handle 4 are attached by screw-threaded portions and a coacting set screw to the ends of the standard 3, thus rendering these parts attachable and detachable at will. It is desirable to employ screw threaded connections between the parts in order to permit ready detachability, but such connections are usually open to the objection that the threads become worn and loosened and permit movement of one part upon the other part, thus rendering the connection ineffective. I overcome this objection by employing in conjunction with the threaded connection a set screw which fits in a screw threaded aperture formed in the side of the handle and intersecting the internal screw threads thereof, the inner end of the screw being adapted to impinge against the threads of the stem of the applied part, thus adapting the threads to coact therewith to hold the applied part against retrograde movement and disconnection. It is preferable to so position the screw receiving aperture and arrange the threads of the stem of the applied part so that the impinging end of the screw will bite against the edges of the threads and so that the portions of the spiral thread will coact therewith in the most efficient way to prevent turning of the applied parts. The proper positioning of the elements is gaged by the use of the shoulder 6 of the blade and the shoulder 9 of the handle, which shoulders abut against the ends of the standard when the stems of the blade and handle are fully inserted, arresting their movement at the time when the threads are properly positioned to receive the impinging ends of the set screws. Thus the parts of the fastenings coact to secure proper positioning thereof and their effectual engagement without requiring any nicety of adjustment on the part of the operator.

The handle 4 is adapted to be used as a tamper and the grip-bar 14 thereof is of oval contour and converges towards an upper edge 15. When this grip-bar is turned to bring the edge 15 downwardly and adapt the handle 4 to be used as a tamper, a wedging

action in the tamping operation ensues by reason of the contour of the grip-bar as just explained. By forming all the parts of the shovel of metal it is rendered exceptionally strong and the standard is materially increased in strength by constructing it from a tube. Furthermore, in the form of the device shown by Figs. 1 and 2 the parts may be readily replaced if necessary by others of a similar structure. By constructing the plugs 5 and 8 solid respectively with the handle and goose neck of the blade, they serve to form rigid connections with the upper and lower screw threaded ends of the standard. Further, said handle, standard and blade being detachably connected together they serve to be readily taken apart so as to be packed for transportation.

Having thus described the invention what is claimed as new, is:

A shovel comprising a blade with a goose neck having a shoulder provided with a solid screw-threaded plug, a hollow standard having internal screw threads in its opposite ends, and screw-threaded openings in the sides of the standard which pass through said internal screw threads, a handle having a shoulder with a solid screw threaded plug, said screw threads of the neck and plug of the handle serving to be detachably secured respectively to said opposite end internal threads of the standard to permit of said shoulders of said neck and handle to engage with the opposite ends of the standard, and set screws inserted in said side screw threaded openings of the standard serving to impinge against the screw threads of said plugs of said goose neck and said handle, substantially as specified.

In testimony whereof, I affix my signature in presence of two witnesses.

JOHN WESLEY ELLISON.

Witnesses:
W. E. McCarson,
M. W. Warren.