Oct. 30, 1923.

1,472,181

E. W. LOUDEN

POCKET SCRIBERS AND COMPASSES

Filed Sept. 11, 1922

2 Sheets-Sheet 1

Fig. 1.

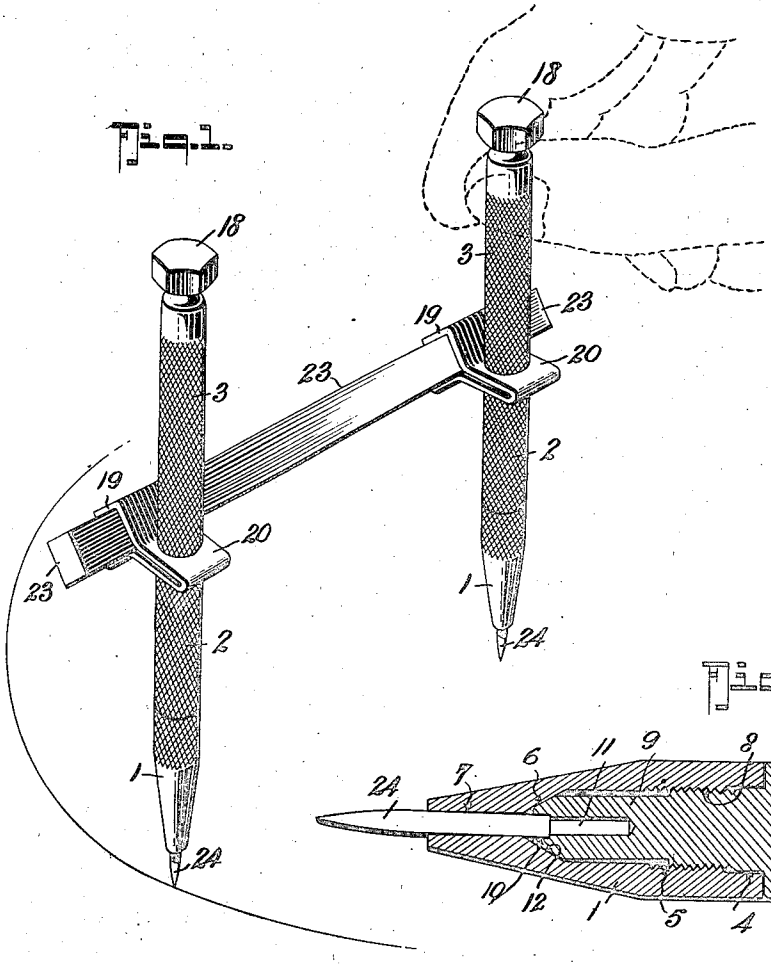


Fig. 7.

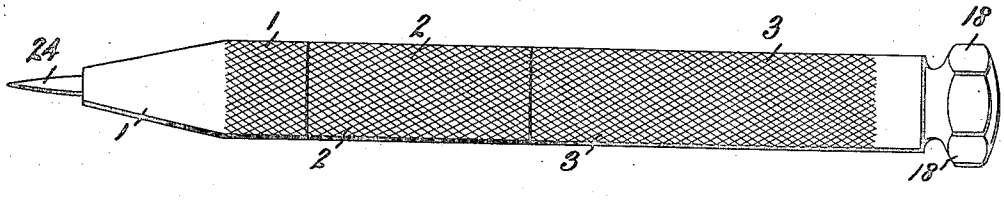


Fig. 2.

INVENTOR

Edgar W. Louden.

BY

Fred Gaisteuston & Co

ATTORNEYS

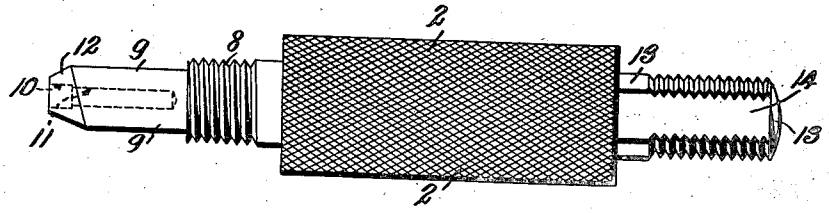
Oct. 30, 1923. 1,472,181

E. W. LOUDEN

POCKET SCRIBERS AND COMPASSES

Filed Sept. 11. 1922 2 Sheets-Sheet 2

Fig. 4.



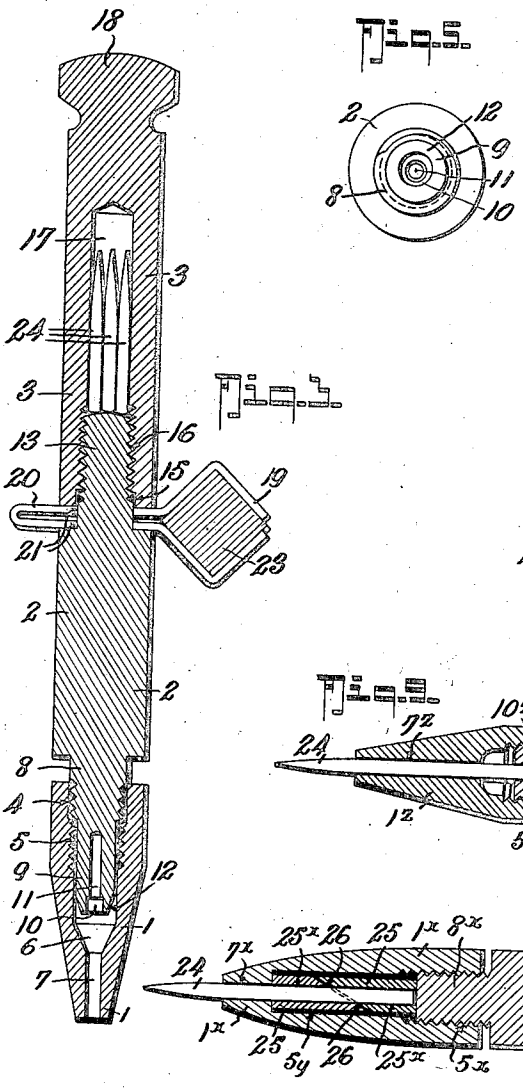


Fig. 5.

Fig. 6.

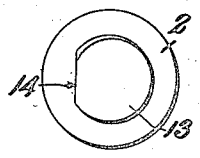


Fig. 7.

Fig. 10.

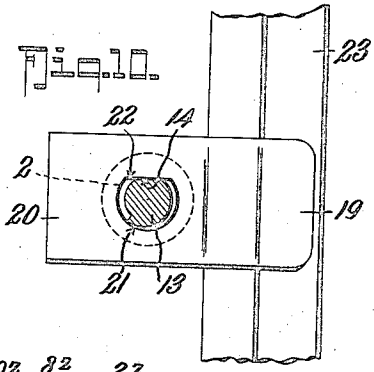


Fig. 8.

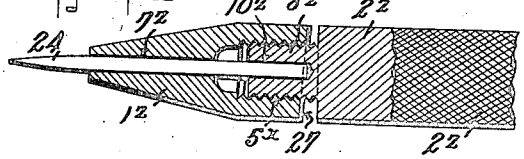


Fig. 9.

INVENTOR

Edgar W. Louden.

BY

Fred G. Dieterich Co

ATTORNEYS

Patented Oct. 30, 1923. 1,472,181

UNITED STATES PATENT OFFICE.

EDGAR WEIMER LOUDEN, OF LEBANON, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO JOSEPH G. HEICHEL, OF LEBANON, PENNSYLVANIA.

POCKET SCRIBERS AND COMPASSES.

Application filed September 11, 1922. Serial No. 587,474.

To all whom it may concern:

Be it known that I, EDGAR W. LOUDEN, a citizen of the United States, residing at Lebanon, in the county of Lebanon and State of Pennsylvania, have invented certain new and useful Improvements in Pocket Scribers and Compasses, of which the following is a specification.

My invention relates to certain new and useful improvements in scribers which adapt the same to use as pocket scribers and enable the same to be used in pairs as dividers or compasses or the like.

Generically the invention resides in providing a tool having a special gripper or chuck for the needles which is stronger, more simple and less expensive to manufacture than the usual split collet chucks, and in which provision is made for a magazine to hold extra needles or points.

More specifically the invention includes those novel features of construction, combination and arrangement of parts, all of which will be first fully described, then be specifically pointed out in the appended claims, reference being had to the accompanying drawings, in which:

Figure 1 is a perspective view of the invention in use as a pair of compasses.

Figure 2 is an enlarged side elevation of one of the scribers per se.

Figure 3 is a vertical longitudinal section of the same, mounted as shown in Figure 1.

Figure 4 is a side elevation of the intermediate part of the tool.

Figure 5 is an end view of the same, looking at the same from the front end.

Figure 6 is an end view, looking at it from the rear end.

Figure 7 is an enlarged detail elevation and part section showing the gripping action of the chuck on the needle.

Figure 8 is a longitudinal section of a modification of my invention.

Figure 9 is a longitudinal section of another modification of the invention.

Figure 10 is a horizontal section taken through one of the scribers at the point of connection therewith of the clamp member.

In the drawings in which like numerals of reference indicate like parts in all of the figures, it will be observed that the scriber per se is composed of three parts, the chuck portion 1, the intermediate portion 2 and the end portion 3. The chuck portion 1 is bored at 7 to receive the needle 24 which forms the scribing point, the bore 7 being enlarged rearwardly by the frusto-conical portion 6, and the enlarged cylindrical portion that is provided with threads 5 is counterbored at 4 to clear the body of the threaded stud 8 of the intermediate part 2. The threaded stud 8 of the intermediate part 2 engages loosely with the threaded part 5 of the chuck and from the threaded stud 8 of the intermediate part 2 there projects a cylindrical member 9 which is axially shallow bored at 10 to line up with the bore 7 of the chuck and receive the needle 24, when the parts 1 and 2 are loosely screwed together and has a smaller diameter weakening bore 11 which assists the resiliency of the said projection 7 and provides a socket in which the point of the needle may be placed, when reversed, so that the instrument may be carried in the pocket without danger of injuring the garment. The projecting member 9, however, is provided with a chamfer 12 which is located eccentrically to the axis of the member 2 and the axes of the bores 7 and 10 whereby, when the parts 1 and 2 are tightly screwed together, the member 9 will be sprung out of alignment, thereby exerting lateral pressure on the needle 24, tending to bend it slightly out of alignment, thereby tightly gripping the needle against withdrawal (see Figure 7).

In order to release the needle, it is only necessary to unscrew the member 1 slightly from the member 2. The projection 9 being of tool steel will spring back into alignment, thereby aligning the bores 7 and 10 and permitting the ready withdrawal of the needle. To supply a needle to the chuck, the reverse operation, of course, takes place.

The intermediate portion 2 of the instrument is provided with a threaded stud 13 having a flat face 14 for a purpose presently explained and the stud 13 is threaded into the threaded end 16 of the bore or chamber 17 in the portion 3 of the instrument, the chamber 17 serving as a magazine for extra needle points 24. The bore or chamber 17 is counterbored at 15 to clear the body of the thread on the stud 13 and the outer end of the end portion 3 may be provided with a head 18, as indicated.

In using my scriber as a pair of compasses, two of the instruments are employed in connection with a square rod 23 of any length desired and two sliding clamps 19 which are adapted to fit on the rod 23 and are provided with holes 21 in ears 20 to fit onto the stud 13, the holes having flat portions 22 to engage the flat faces 14 of the stud 13 and prevent relative turning of the scribers in the holes 21. In mounting the scribers on the clamps 19, the parts 2 and 3 are unscrewed and the stud 13 is slipped through the hole 21, after which the parts 2 and 3 are again screwed together, thereby securing the clamp 19 with retaining friction on the rod 23 at the location desired. Two scribing instruments are used as indicated in Figure 1 of the drawings.

In Figure 8 I have illustrated a modification of my invention wherein the body portion 2^x has its threaded end 8^x screwed into the threaded end 5^x of the socket 5^y of the chuck 1^x. The socket 5^y is large enough to receive, loosely, two grippers 24—24 having needle holes 24^x in alignment with one another and with the chuck needle hole 7^x to receive the needle when the parts are in loose engagement. They are, however, provided with opposing bevelled faces 25 which, when the chuck 1^x is screwed home, will cause a mis-alignment of the holes 24^x and thereby grip the needle.

In Figure 9 is shown another modification in which the body 2^z has its threaded lug 8^z loosely threaded into the threaded portion 5^x of the chuck bore, and it has a needle hole 10^z to line up with the needle bore 7^z of the chuck 1^z when the parts are loosely screwed together. When, however, the parts are tightly screwed together the angular face 26 of the chuck 1^z will engage the square face of the body 2^z and cause a mis-alignment of the holes 10^z—7^z, thereby gripping the needle.

I wish, however, to call attention to the fact that this tool has primarily been designed as a pocket scriber with a special grip or chuck for the needles, the gripper chuck being stronger than the ordinary split collet, and less expensive to manufacture; furthermore the scriber being made in accordance with the present disclosure is well adapted in connection with the square rod and split clamps to function as an element of a trammel.

The holder with the special grip or clutch can also be adapted for holding other rod-like articles and I do not wish to be limited to the use of the tool for holding scriber needles alone.

From the foregoing description taken in connection with the accompanying drawings, it is thought the complete construction, uses and advantages of the invention will be clear to those skilled in the art.

What I claim is:

1. A scriber comprising a body in three parts, namely a needle chuck part, an intermediate part and a needle magazine part, said chuck having a bore of two diameters connected by a frusto-conical surface, the bore portion of larger diameter being threaded, the intermediate portion having a male element threaded into said threaded bore portion and having its end chamfered eccentrically to its axis to engage said frusto-conical surface and having a needle bore concentric with its axis and with the bore of the chuck.

2. In a scriber, a chuck having a bore of two diameters connected by a frusto-conical surface, the bore portion of larger diameter being threaded, a body section having a male element threaded into said threaded bore portion and having its end chamfered eccentrically to its axis and having a needle bore concentric with its axis and with the bore of said chuck, said chamfered end co-operating with said frusto-conical surface for the purposes described.

3. A scriber comprising a body composed of a plurality of parts, two of said parts having male and female threaded connection, one of said two parts having a needle receiving magazine or chamber closed by the said threaded connection, said body also including a needle holding chuck, means within the chuck for applying lateral pressure to the needle tending to distort it out of alignment with its axis.

4. A scriber comprising a body made of a plurality of parts, one of said parts consisting of a needle chuck having a bore of two diameters connected by a frusto-conical surface, the bore of lesser diameters adapted to receive a scribing needle, the bore of greater diameter having a female thread, another of said body parts comprising a threaded stud to enter said bore of greater diameter and engage the female threads thereof, and including a projecting portion terminating in a chamfered end eccentric with the axis of the bore of the chuck, said projecting portion having a needle receiving bore concentric with the bore of said chuck, said needle receiving bore including a counterbore portion at the outer end for the purposes described.

5. In an instrument of the character described, a rod, split clamps slidable on said rod, scriber members carried by said split clamps and each comprising a body composed of a plurality of parts, one having a female thread and the other having a lug provided with a nail thread, said split clamps having holes to receive the lugs of said scribers, whereby when said scriber parts are screwed together, said clamps will be held with retaining friction on said rod for the purposes described.

6. A scriber comprising a body composed of a plurality of parts, two of said parts having male and female threaded connections, one of said two parts having a needle receiving bore, and means cooperative with said threaded connections for holding the needle in said bore by side thrust pressure on the needle.

7. A tool holder comprising a body composed of a plurality of parts threaded together, one of said parts constituting a chuck and being provided with a tool receiving bore, means within the chuck for applying lateral pressure to the tool for the purposes specified.

8. A tool holder comprising a body composed of a plurality of parts threaded together, one of said parts constituting a chuck, said parts having tool receiving holes, and means for throwing the tool holes out of alignment with each other after the tool is inserted to thereby grip the needle.

9. In an instrument of the character described, a rod, split clamps slidable on said rod, scriber members carried by said split clamps and each comprising a body composed of a plurality of parts, one having a female thread and the other having a lug provided with a male thread, said split clamps having holes to receive the lugs of said scribers, whereby when said scriber parts are screwed together, said clamps will be held with retaining friction on said rod, said holes having flat portions and said lugs having flat faces whereby to prevent turning of said scriber lugs in said holes.

EDGAR WEIMER LOUDEN.