No. 617,675. Patented Jan. 10, 1899.

W. K. CRAWFORD.

DIVER'S BELT.

(Application filed Sept. 1, 1898.)

(No Model.)

Fig. 1

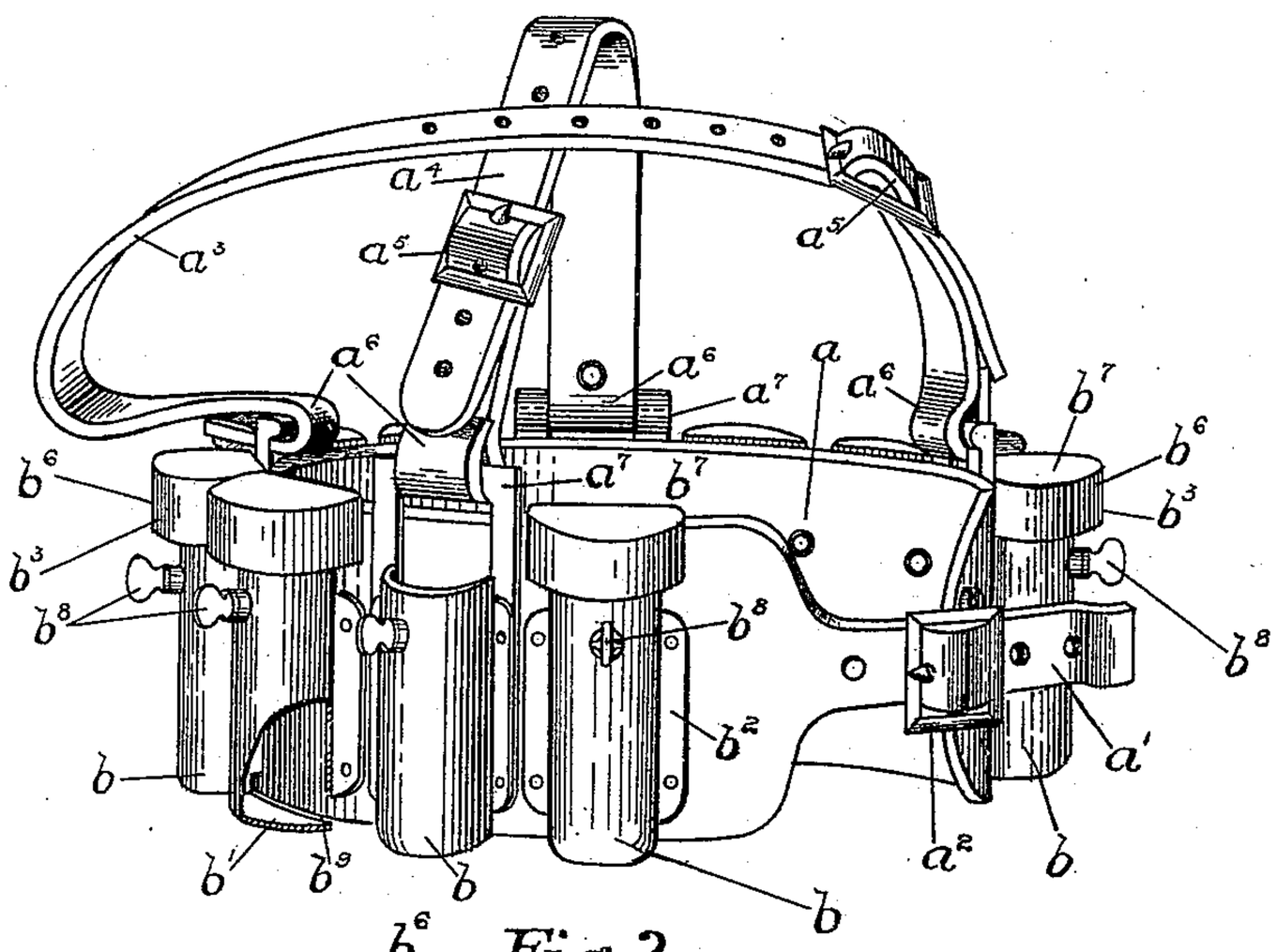
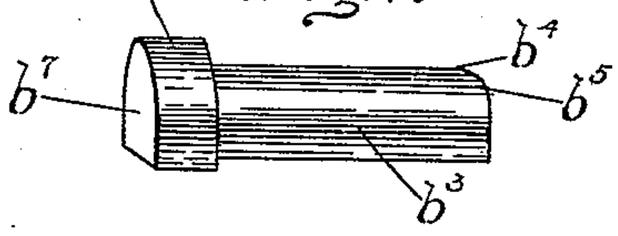


Fig. 2



Witnesses.
Gustave F. Magnitzky.
Edward H. Allen.

Inventor:
William K. Crawford,
by Crosby & Gregory—
Attys.

UNITED STATES PATENT OFFICE.

WILLIAM K. CRAWFORD, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO A. J. MORSE & SON, OF SAME PLACE.

DIVER'S BELT.

SPECIFICATION forming part of Letters Patent No. 617,675, dated January 10, 1899.

Application filed September 1, 1898. Serial No. 690,001. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM K. CRAWFORD, of Boston, county of Suffolk, and State of Massachusetts, have invented an Improvement in Divers' Belts, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention is an improved diver's belt for weighting a diver in his subaqueous work.

It is customary for a diver to be provided with a removable belt to be fastened about his waist, said belt having riveted thereto a large number of metal weights aggregating about ninety pounds; but inasmuch as a diver needs more weight for deep work than he does for shallow work I have invented the herein-described belt, in which a plurality of pockets are provided containing removable weights of peculiar construction.

The various features of my invention and the advantages thereof will be more particularly pointed out in the course of the following description, reference being had to the accompanying drawings, illustrative of a preferred embodiment of my invention, and the latter will be defined in the appended claims.

In the drawings I have shown in Figure 1 a perspective view of a belt and harness embodying my invention, and in Fig. 2 a similar view of one of the weights or leads.

The belt proper, a, is preferably constructed of heavy sole-leather of considerable width and provided with fastening means, herein shown as a strap a' and buckle a^2 at the respective ends of the belt, the belt being secured to the person by crossed shoulder-straps a^3 a^4, adjustable by means of buckles a^5 and secured to the belt by their ends a^6, looped over hinge-like fixtures a^7, riveted or otherwise secured to the body of the belt.

The belt is provided on its outer surface with a series of vertically-arranged cups or pockets b, approximately semicylindrical in cross-section and having closed bottoms b' and open tops, said pockets being provided with lateral flanges b^2, riveted or otherwise fastened to the belt. These pockets are preferably made of considerable thickness and weight in order that they of themselves may be of sufficient weight for light use. Removable weights or leads b^3, weighing about seven pounds each, are provided to fit within these pockets, one of said weights being shown removed from its pocket and lying in front of the belt and other similar weights being shown in operative position within their pockets. Each weight is herein shown as having a semicylindrical lower or body portion b^4, corresponding in size and shape to the pockets and preferably rounded on its edges at its lower end b^5, so as to be readily inserted in the pocket, and has an enlarged or shouldered head b^6, having a preferably flat top b^7. The shoulder of the head fits against the open mouth of its pocket and projects therefrom slightly, so as to enable the user readily to grasp the weight and remove it when under water, and the flat enlarged top receives the water-pressure sufficiently to aid in holding the weight down into its cup. In some situations, however—for instance, such as where considerable bending over is required of the diver—it is advisable to have set-screws b^8 in addition to the flat tops. The bottoms of the cups are not entirely closed, as will be seen at b^9, this provision being made in order to enable the weights to be readily removed without suction.

In use it will be understood that a skilled professional diver will be able to estimate approximately the exact weight which he will require in order to give him freedom of movement beneath the water under the particular circumstances of the case. Accordingly if the weight of the pockets themselves is not sufficient for his purpose the diver will put in such a number of weights b^3 as he may deem necessary.

After descending into the water, if the diver should find that he has more weight than he requires, he removes one or more of the weights from their pockets, being enabled to do this with ease, notwithstanding his necessarily clumsy movement, simply by engaging the weight under its s[redacted]ared head and pulling it up, the opening in the bottom permitting the head to move freely out of its pocket; or if, having descended, the diver finds that he is light-weighted his attendant can drop a weight to him, which he can then readily insert, even though under water, the

rounded end of the weight aiding the latter to find its way into its pocket. The rounded projecting surfaces of my apparatus offer the slightest resistance to currents or other obstructions which might engage them under water.

The pockets are open on their rear sides against the belt, so that when the diver's suit is inflated the air causes it to press the belt tightly against the weights within the pockets, thereby gripping and holding them in place.

Various changes and details may be resorted to within the spirit and scope of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The herein-described diver's belt, comprising a belt adapted to be placed about the diver, and provided with a plurality of pockets, combined with heavy removable weights of high specific gravity adapted to be retained by said pockets, substantially as described.

2. The herein-described diver's belt, comprising a belt adapted to be placed about the diver, and provided with a plurality of pockets, combined with removable weights adapted to be retained by said pockets, said weights having enlarged shouldered heads, substantially as described.

3. The herein-described diver's belt, comprising a belt adapted to be placed about the diver, and provided with a plurality of pockets, combined with removable weights adapted to be retained by said pockets, said weights having enlarged shouldered heads and flat extended tops, substantially as described.

4. The combination with a diver's belt, of a pocket having its bottom only partially closed, combined with a weight having a body corresponding in shape and size to said pocket, and provided with an enlarged head projecting beyond the open upper end of said pocket, substantially as described.

5. A diver's belt, having a plurality of heavy metallic pockets permanently secured thereto, and removable weights adapted to be retained in said pockets, substantially as described.

6. A diver's belt provided with a plurality of semicylindrical pockets, in combination with correspondingly-shaped weights adapted to be retained in said pockets, substantially as described.

7. A diver's belt comprising a flexible belt having a plurality of pockets on its outer surface, said pockets being open on their inner sides next said belt, combined with a plurality of removable weights adapted to fit within said pockets, whereby the inflated diver's suit acts to press said flexible belt against said weights to retain the latter within the pockets, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM K. CRAWFORD.

Witnesses:

GEO. H. MAXWELL,

MABEL PARTELOW.