No. 654,940. Patented July 31, 1900.

F. W. BROOKS.

SEAL.

(Application filed May 8, 1900.)

(No Model.)

Fig. 1. Fig. 2. Fig. 3. Fig. 4

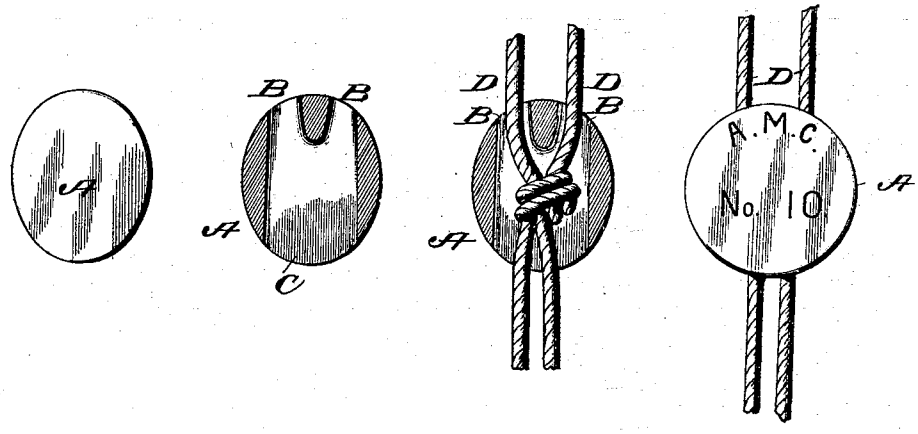
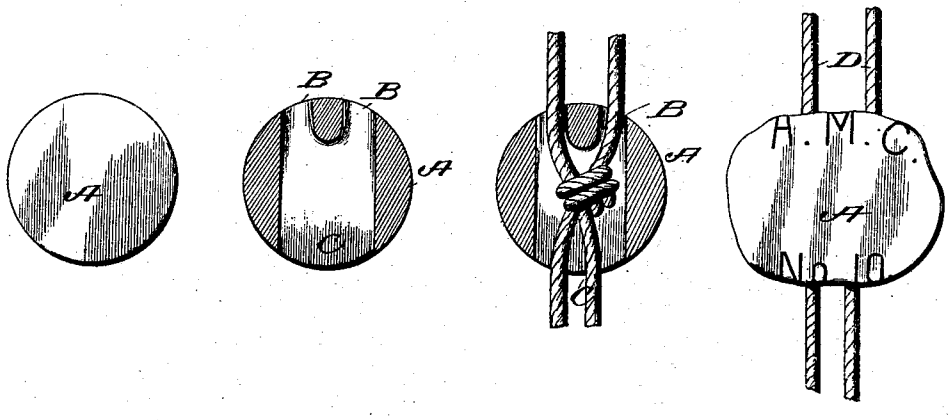


Fig. 5. Fig. 6. Fig. 7. Fig. 8.



Witnesses

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UNITED STATES PATENT OFFICE.

FRANKLIN W. BROOKS, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR TO THE GRANT MANUFACTURING COMPANY, OF VIRGINIA.

SEAL.

SPECIFICATION forming part of Letters Patent No. 654,940, dated July 31, 1900.

Application filed May 8, 1900. Serial No. 15,912. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN W. BROOKS, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Seals; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in seals for railroad and other purposes, and particularly to that class in which a cord is used as the shackle and the ends of which are knotted and drawn within an enlarged pocket or recess within the body of the soft-metal seal. In seals of this class it is desirable that after compression they should be of circular form in order that the impressions produced by the circular dies of a sealing-press should be properly and uniformly displayed. It has been customary in making seals designed for the use of the knotted shackle or cord to cast or otherwise form them of round or circular form, and it has been found from experience that when such a seal, with the knot of the shackle located in its recess or pocket, is compressed by the dies the displacement of the metal by the presence of the knot is such that the original circular form of the seal is converted into an irregular or distorted shape and leads to confusion or imperfect representation of the characters designed to be impressed thereon by the dies of the seal-press.

My invention has for its object to provide a seal of the character stated which shall compensate for the natural displacement of the metal by the knot contained within the recess or pocket in such manner that the seal when finally compressed shall be circular or round and with the characters produced by the face of the dies sharply and uniformly displayed on the faces of the seal.

With these ends in view my invention consists of a soft-metal seal of substantially-elliptical design provided with shackle-channels and a knot recess or pocket arranged within its longest diameter in such manner that when the shackle or cord is passed through the shackle-channels and knotted and the knot is drawn into its recess or pocket and pressure applied to compress the seal the movement or displacement of the metal resulting from the presence of the knot shall cause the seal to assume a round or circular form, as will be hereinafter more fully described.

In order that those skilled in the art to which my invention appertains may know how to make and use the same and fully understand its advantages, I will proceed to describe the construction and method of using it, referring by letters to the accompanying drawings, in which—

Figure 1 is a plan view of one of my improved seals with the shackle or cord removed. Fig. 2 is a central horizontal section of the same. Fig. 3 is a view similar to Fig. 2 and with the shackle or cord in place. Fig. 4 is a plan view of the seal and cord shown at Fig. 3 and after it has been duly compressed by an ordinary seal-press. Figs. 5, 6, 7, and 8 are views corresponding, respectively with Figs. 1, 2, 3, and 4 and of the present form of seals specially designed for use with a knotted shackle or cord.

Similar letters of reference indicate like parts in the several figures of the drawings.

A is the soft metal. B B are the shackle or cord channels, and C is the pocket designed to receive the knotted portion of the shackle or cord D.

My improved seal A, as shown at Figs. 1, 2, and 3, is of elliptical form, with the channels B and pocket C in the plane of the longest diameter of the seal, and when the knot of the shackle or cord D is drawn within the pocket C and the seal is subjected to compression between the dies of the seal-press the action of the dies upon the body of the seal and the resistance offered by the concealed knot within the pocket or recess C cause the elongated portions of the seal above and below the center thereof to move toward said center to the same degree that the narrower portions of the body are expanded or move out radially, so that when the compression has been completed the body has assumed the circular or round condition shown at Fig. 4 and with the characters or numbers uniformly exposed within the bound-

ary of the seal and sharply impressed, as shown.

By reference to Figs. 5, 6, 7, and 8 it will be seen that when a seal such as represented in said figures is subjected to compression under the conditions heretofore stated the action is such that the original circular form of the seal A, as shown at Figs. 5, 6, and 7, is distorted into the form shown at Fig. 8 or some other equally-irregular form, and the characters designed to be impressed upon the face of the seal are not uniformly located with reference to the boundaries of the seal and may or may not be readily decipherable. This is due to the fact that at the upper edge of the seal where the shackle-channels exist the seal is strengthened and rendered less yielding to the action of the dies than that portion below the bridge, and consequently it will not move outwardly under compression while that portion below the bridge, having nothing to hold or brace it, owing to the necessity for the pocket to receive the knot of the shackle-cord, is free to and in practice does move outwardly under the action of the dies. This tendency is supplemented by the presence of the knot of the shackle, because when the knot is flattened by the dies it moves radially and presses against the lead on each side, and as there is no lead below the knot the seal does not move in that direction except to a very limited extent.

In the manufacture of lead seals, and in view of the cost of lead and the low price of the finished article, it is necessary to practice great economy in the use of the lead, and consequently it is customary to cast the seals somewhat less in diameter than they should be after compresion under dies, and as the lead is partially flattened before the characters on the dies are impressed upon the seal it will be seen that if the area of the partially-flattened seal is not commensurate with that of the dies some portion at least of the characters will fail to be impressed on the seal.

The difference in results of compression of my improved form of seal and that which has preceded it is significant when the fact is kept in mind that the act of sealing is necessarily hastily done and executed by operators not always of the most skilful type, and that hence it is of the utmost importance that the seal shall accurately and plainly indicate the record it is designed to make.

What I claim as new, and desire to secure by Letters Patent, is—

A seal composed of soft metal, elliptical in shape and with shackle-channels and a recess or pocket lying within the plane of the greater diameter of the seal, in combination with a shackle or cord, the free ends of which are knotted and said knot located within the pocket or recess and adapted to be concealed and locked therein, substantially as and for the purpose set forth.

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

FRANKLIN W. BROOKS.

Witnesses:
D. G. STUART,
WM. C. MCINTIRE.