G. S. RINEBOLT.

GAGGER OR SAND ANCHOR.

APPLICATION FILED APR. 18, 1910.

978,782.

Patented Dec. 13, 1910.

Fig. 1.

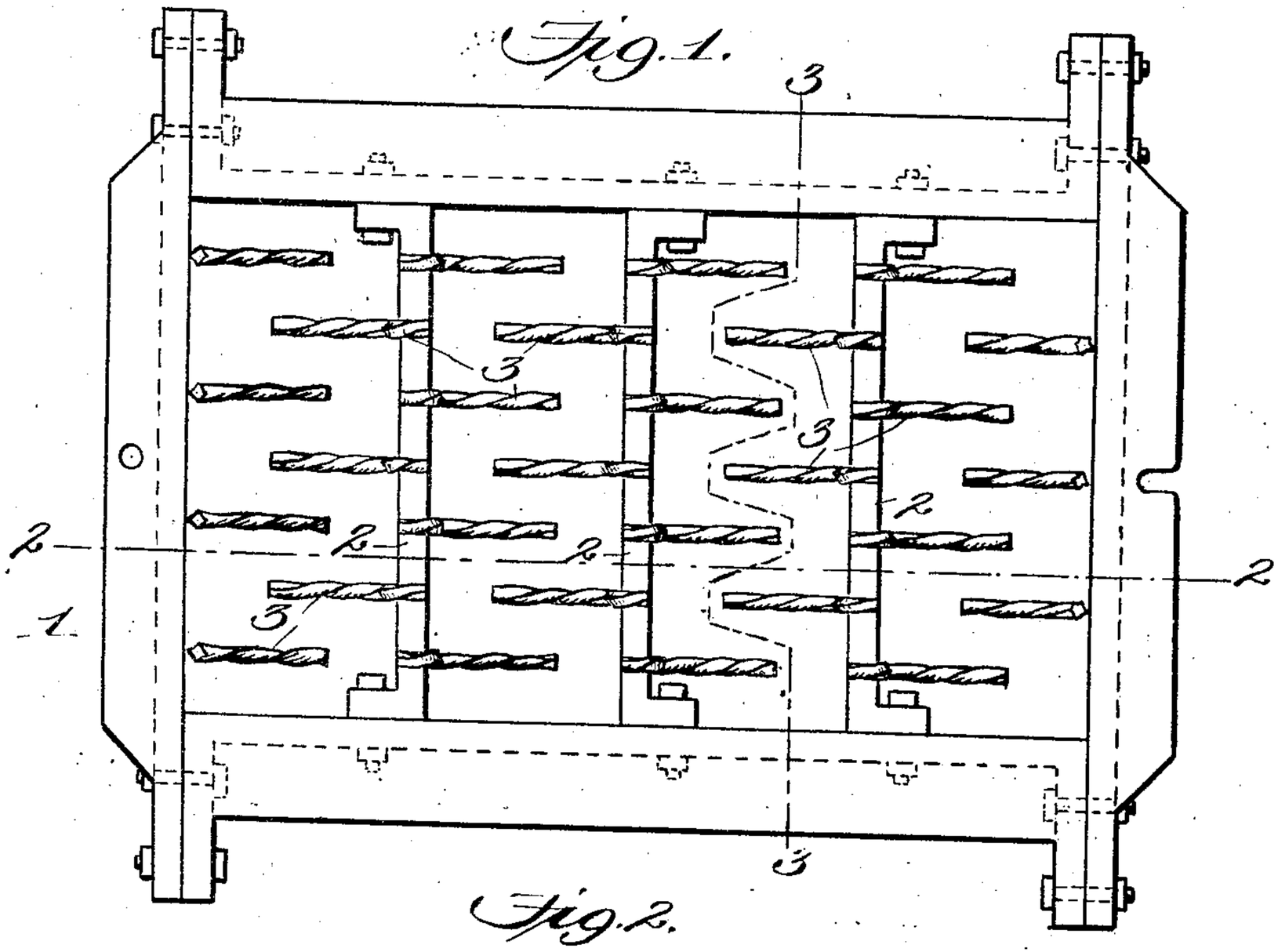


Fig. 2.

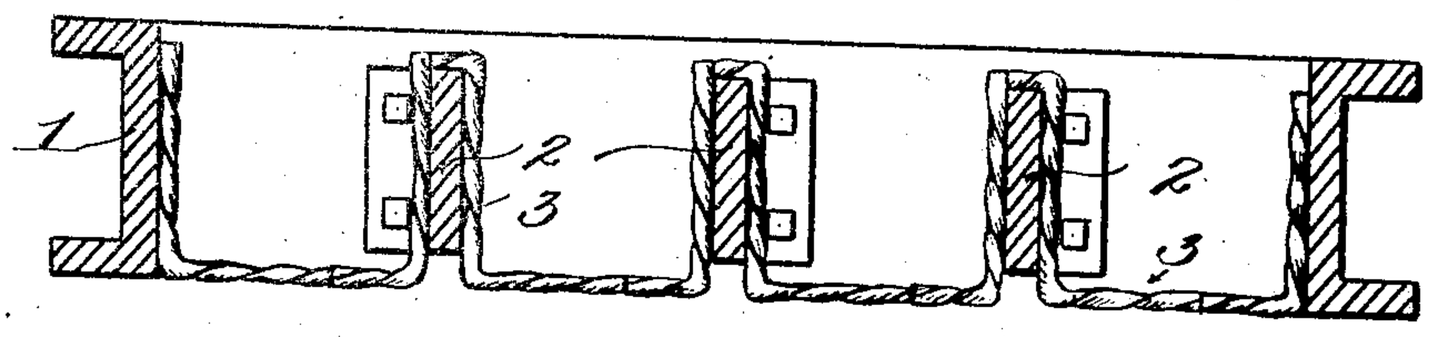


Fig. 3.

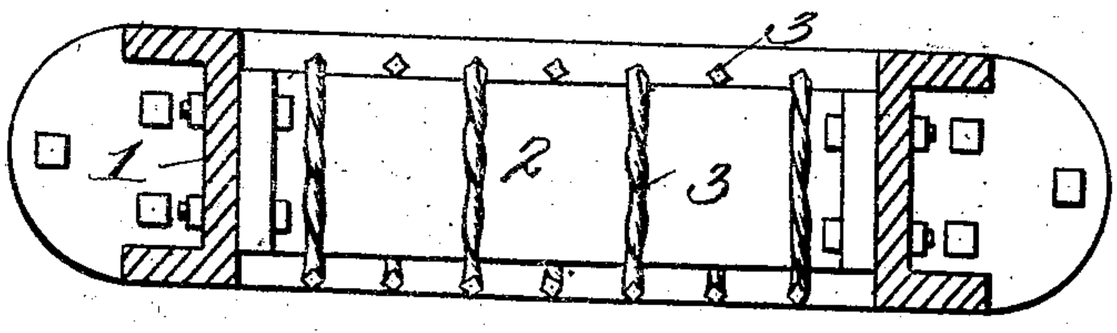


Fig. 5.

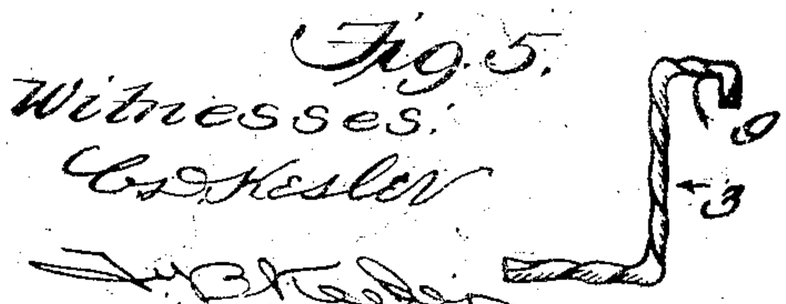
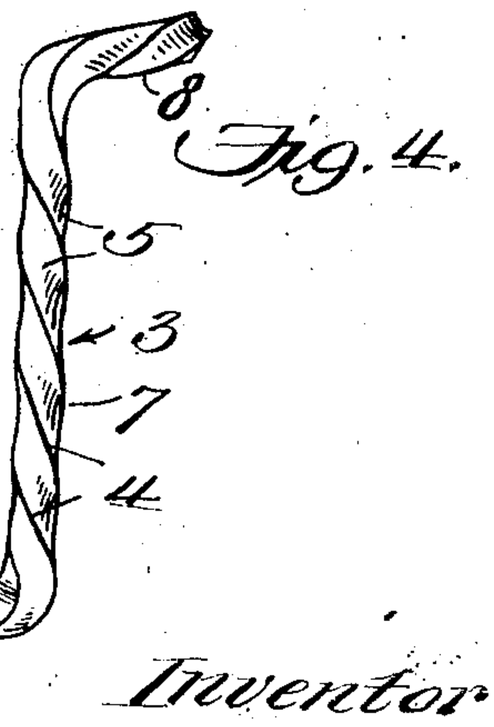


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

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GAGGER OR SAND-ANCHOR.

978,782. Specification of Letters Patent. **Patented Dec. 13, 1910.**

Application filed April 18, 1910. Serial No. 556,142.

To all whom it may concern:

Be it known that I, GUY S. RINEBOLT, a citizen of the United States, residing at Franklin, in the county of Venango and State of Pennsylvania, have invented new and useful Improvements in Gaggers or Sand-Anchors, of which the following is a specification.

This invention relates to improvements in gaggers or sand anchors, and it has for its objects to provide a device of such construction that the best and most secure adherence of the sand is afforded, and withal, one which shall be inherently simple and inexpensive, requiring no modification of the flask construction, and superior in use to any of the known sand anchoring devices or expedients.

An embodiment of the invention and its application are illustrated, by way of example, in the accompanying drawings, wherein:

Figure 1 is a plan view showing several of the gaggers in their application to a section of a molding flask. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a cross section on the line 3—3 of Fig. 1. Fig. 4 is a detail perspective view of a gagger *per se*, and Fig. 5 is a side elevation of an alternative gagger construction.

Similar characters of reference designate corresponding parts throughout the several views.

The flask section, designated by the numeral 1, is of ordinary construction, and is provided with the cross pieces 2, which are employed to assist in the retention of the sand. The gaggers are designated by the numeral 3, and are of novel formation, being each constructed of a bar section of twisted steel, having the spirally directed ribs or apices 4 and the intervening flat or grooved faces 5. By preference, each gagger is of L-shape in side elevation, having the horizontal leg 6 and the vertical leg 7. In some instances, the upper end portion of the leg 7 may be turned horizontally, as at 8, (Fig. 4) or may be of inverted U-shape, as at 9, (Fig. 5), in order that the gaggers may be positively hung from the cross pieces of the flask.

The spirally twisted construction of the gagger herein disclosed by way of exemplifying the invention, has been found to be much more facile and economical than any of the known gaggers or anchoring expedients. The superior efficacy of the present gagger will be readily apparent when it is considered that its spirally twisted construction provides for stress-resisting lines and areas of the greatest possible lineal extent and at the same time of the most efficient character, viz. of tortuous or sinuous outline of facile pitch, and that these irregularly extending stress-resisting lines and areas are directed both horizontally and vertically and at angles to the major and minor axes of the gagger. By virtue of these features, the secure adherence of the sand is assured and its liability to displacement is rendered practically negligible.

In the use of a flask section of the form herein disclosed, the best results are obtained by disposing the gaggers in staggered relation. The assemblage of the gaggers involves no special parts or modification of the flask section, the gaggers being simply set into the sand or hung from the cross pieces. Withal, the construction is inherently of the simplest and most inexpensive character.

The invention is believed to be of considerable novelty within its particular field, and for this reason no specific description herein contained is to be regarded as placing any limitation upon the scope of the appended claims, not inherent in the language thereof.

Having fully described my invention, I claim:

1. A gagger consisting of a bar section of spirally twisted steel having a substantially flat-sided cross section.

2. A gagger consisting of an L-shaped bar section of spirally twisted steel having a substantially flat-sided cross section.

3. A gagger consisting of a bar section of spirally twisted steel having a substantially flat-sided cross section and having more than one lineal dimension.

4. A gagger consisting of a bar section of spirally twisted steel having a substantially flat-sided cross section and having a laterally-turned extension at one end thereof.

5. A gagger consisting of an L-shaped bar section of spirally twisted steel having a substantially flat-sided cross section and

having a vertical leg and a horizontal leg, the vertical leg having at its upper end a laterally-turned extension.

6. A gagger consisting of a bar section of substantially flat-sided cross section and faced with sinuously directed surfaces.

7. A gagger consisting of a bar section of substantially flat-sided cross section and constructed to afford stress-resisting lines extending axially of the gagger and in varying directions.

8. A gagger consisting of a bar section surfaced with stress-resisting ribs of sinuous outline.

9. A gagger consisting of a bar section surfaced with stress-resisting ribs extending in a direction at an angle to the major and minor axes of the bar section.

10. A gagger consisting of a bar section surfaced with spaced stress-resisting ribs and intervening stress-resisting faces extending at an angle to the major and minor axes of the bar section.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

GUY S. RINEBOLT

Witnesses:
JOHN L. MCBRIDE,
WM. B. GRIFFIN.