

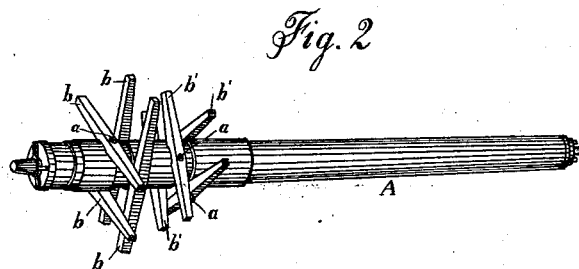
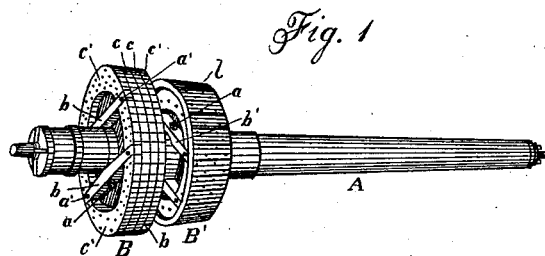
(No Model.)

R. S. BATTLES.

SAND REEL FOR WELL DIGGING RIGS.

No. 347,314.

Patented Aug. 17, 1886.



Witnesses.

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UNITED STATES PATENT OFFICE.

RUSH S. BATTLES, OF GIRARD, PENNSYLVANIA.

SAND-REEL FOR WELL-DIGGING RIGS.

SPECIFICATION forming part of Letters Patent No. 347,314, dated August 17, 1886.

Application filed January 29, 1886. Serial No. 190,227. (No model.)

To all whom it may concern:

Be it known that I, RUSH S. BATTLES, a citizen of the United States, residing at Girard, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Sand-Reels for Well-Drilling Rigs; 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.

This invention relates to what are known as "sand-reels" in oil or other well drilling rigs; and it consists of improvements in the construction of the friction-wheel and back brake-wheel of the reel and the manner of attaching the same to the shaft. The sand-reel of a well-drilling rig is the reel of the sand-pump line, and they are always made of a large wooden shaft, a wooden friction-wheel built upon the shaft, and a wooden back brake-wheel, also built upon the shaft. Great difficulty is experienced in firmly securing these wheels to the shaft, and in the checking or splitting of the shaft.

The object of my invention is to overcome these defects, and thereby secure a stronger and more durable reel.

My construction will be clearly understood from the following general description.

My invention is illustrated in the accompanying drawings, as follows:

Figure 1 is a perspective view of my improved sand-reel complete. Fig. 2 is a perspective view of the shaft of the reel, and the skeletons on the wheels in place on the shaft.

A is the shaft. B is the back brake-wheel; B', the friction-wheel. *b b b* are the skeleton arms of the back brake-wheels. *b' b' b' b'* are the skeleton arms of the friction-wheel. *a* are the bolts which secure the arms to the shaft, and *c* and *c'* are the planks forming the body of the wheels.

The back brake and the friction wheel are constructed in the same manner, except that the friction-wheel is covered with cross-pieces or laggings *l*, and it is made tapering. In each wheel there are four skeleton arms. These are arranged in pairs, and each pair is bolted to the shaft by a single bolt, *a*, so that the two forming the pair are parallel, and the two pairs are put on at right angles to each

other, so that the two bolts which hold them pass through the shaft at right angles to each other. The arms of one wheel are so placed as to set at an angle to those in the other wheel, preferably at an angle of forty-five degrees, so that the bolts holding the arms of one wheel will not be parallel with the bolts holding the arms of the other wheel, and thus the four pairs of arms, with their bolts, firmly bind the shaft and prevent it splitting. The pairs of arms in each wheel are placed a fixed distance from each other longitudinally of the shaft—as, for example, as illustrated, they are far enough apart to admit the two-inch plank *c c* between them. These planks *c c* are made in the form of the wheel, and are securely bolted to the ends of the arms by the bolts *a'*, and form the web of the wheel, and also part of its face. The remainder of the face of the wheel is formed by sector-formed pieces *c' c'*, of the same thickness as the arms, which are bolted or spiked onto the web and fill the spaces between the ends of the arms. This method of constructing a wooden wheel on a wooden shaft may be employed wherever such a wheel and shaft are used, whether for sand-reels or not.

What I claim as new is—

1. The combination, for the purposes named, on the shaft A, of the web *c c*, two parallel arms on each side of said web, bolted on opposite sides of the shaft and to the web, the arms on one side of the web being set at an angle to those on the opposite side, and rim-pieces *c' c'*, secured on each side of said web, filling the space between the said arms.

2. In a sand-reel for well-drilling rigs, the combination, on the shaft A, of two wheels, each consisting of two pairs of arms secured to the shaft by bolts *a a*, passing through the shaft in opposite directions, a web, *c*, between the arms, and sector-formed rim-pieces *c'*, filling the space between the ends of the arms, the arms of one wheel being set at an angle to the arms of the other wheel, substantially as set forth.

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

R. S. BATTLES.

Witnesses:

GEO. D. GILBERT,
JNO. K. HALLOCK.