R. H. MACHIN.

SAND REEL FOR OIL WELL RIGS.

APPLICATION FILED SEPT. 25, 1911.

1,035,982.

Patented Aug. 20, 1912.

2 SHEETS—SHEET 1.

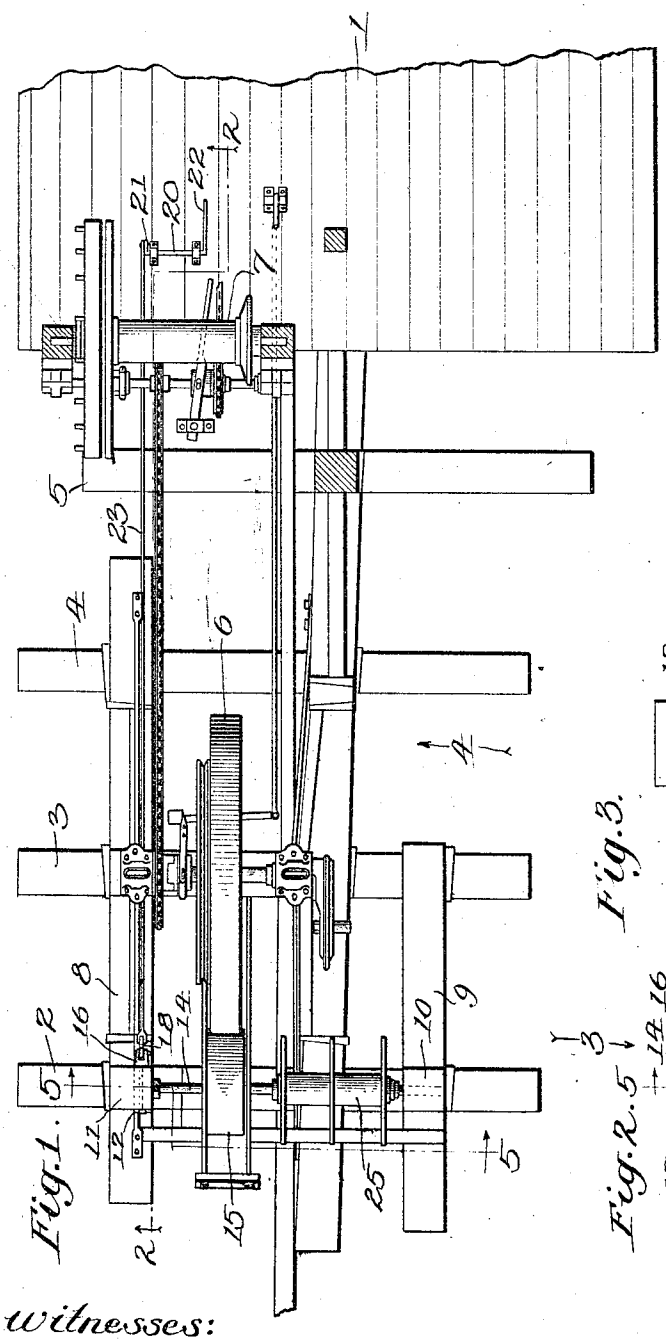

Fig. 1.

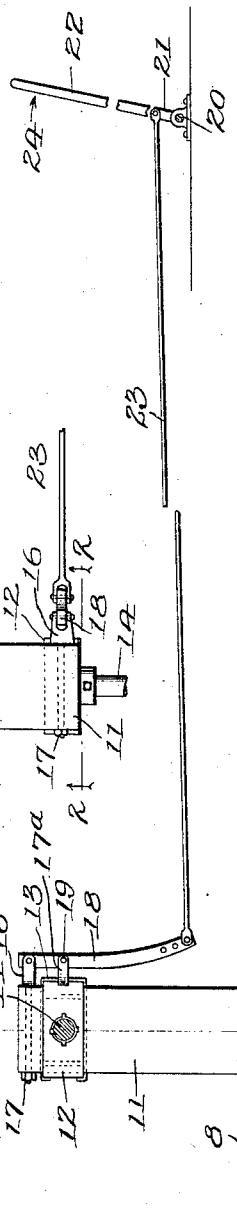

Fig. 3.

Fig. 2.

Witnesses:

F. Williams

W. F. Allen

Inventor

Royal H. Machin.

by Wells & Williams

his attorneys

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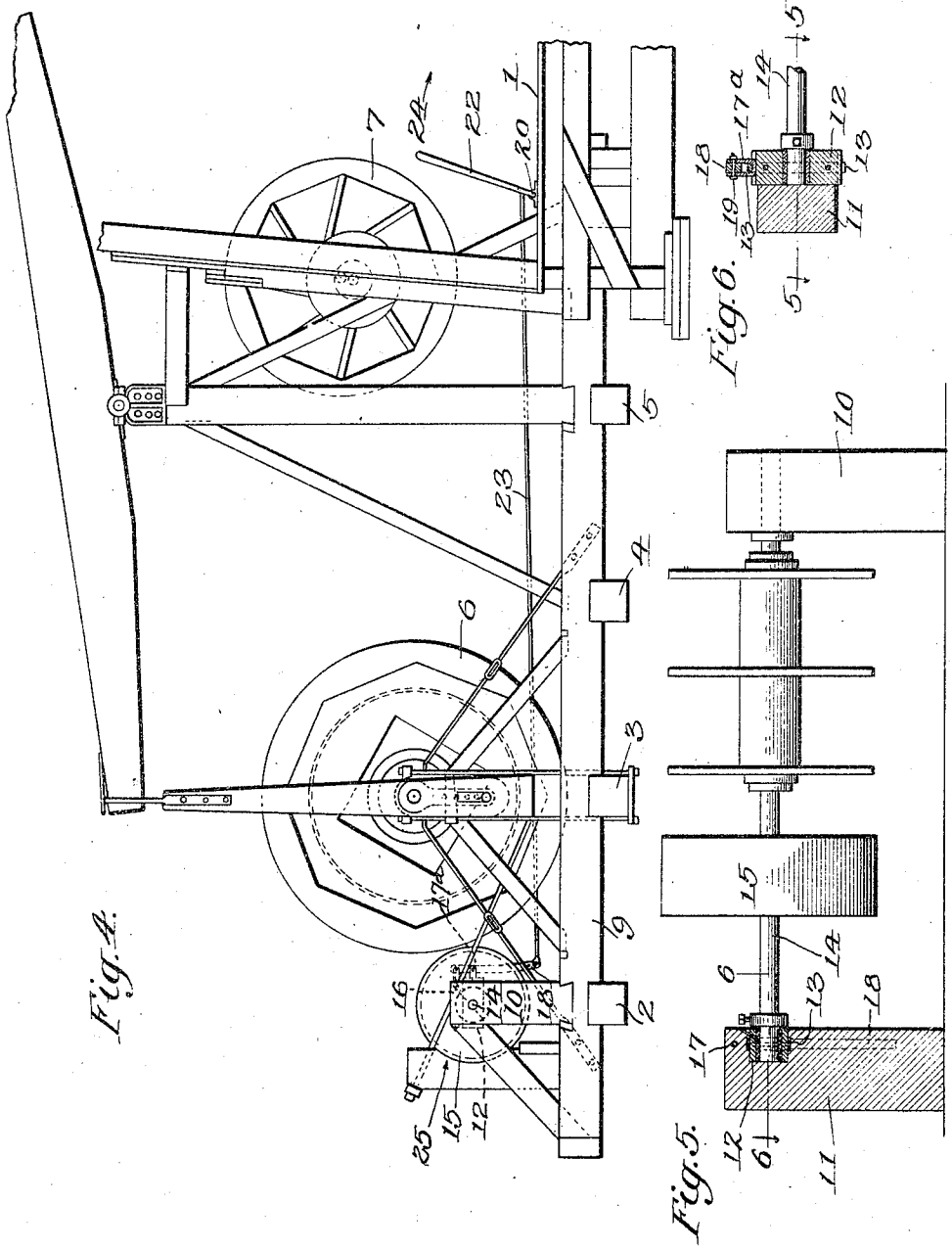

Fig. 4.

Fig. 6.

Fig. 5.

Witnesses:

F. Williams,

C. H. Allen,

Inventor;

Royal H. Machin

by Wells & Williams

his attorneys.

UNITED STATES PATENT OFFICE.

ROYAL H. MACHIN, OF FULLERTON, CALIFORNIA.

SAND-REEL FOR OIL-WELL RIGS.

1,035,982. Specification of Letters Patent. Patented Aug. 20, 1912.

Application filed September 25, 1911. Serial No. 651,290.

To all whom it may concern:

Be it known that I, ROYAL H. MACHIN, a citizen of the United States, residing at R. F. D. 4, Box 123, Fullerton, county of Los Angeles, State of California, have invented a new and useful Sand-Reel for Oil-Well Rigs, of which the following is a specification.

My object is to improve the mechanism for operating a sand reel by contact with the band wheel and my invention consists of the novel features herein shown, described and claimed.

In the drawings: Figure 1 is a fragmentary plan of the floor of a standard rig for an oil well and showing my improved sand reel construction. Fig. 2 is a sectional elevation on the line 2—2 of Fig. 1 and looking in the direction indicated by the arrow. Fig. 3 is an enlarged top plan view of the knuckle joint post and its connections as seen looking in the direction indicated by the arrow 3 in Fig. 2. Fig. 4 is a side elevation of the parts shown in Fig. 1 and taken looking in the direction indicated by the arrow 4. Fig. 5 is a cross section on the lines 5—5 in Figs. 1, 2 and 6. Fig. 6 is a horizontal section on the line 6—6 in Fig. 5.

Referring to the drawings in detail, the floor of the derrick 1 is of the ordinary construction and the timbers 2, 3, 4, and 5 are substantially on the level with the floor. The band wheel 6 is mounted upon the timber 3 and the calf wheel 7 is mounted upon the edge of the floor 1. Timbers 8 and 9 are mounted upon and cross wise of the timbers 2 and 3. The stationary sand reel post 10 extends upwardly from the timber 9 and the knuckle joint sand reel post 11 extends upwardly from the timber 8, said posts 10 and 11 being in transverse alinement. The cast iron bearing block 12 is mounted in a recess formed horizontally from the inner face of the post 11 and near its upper end. A piece of strap iron is bent into a U-shape and the ends of the strap iron are attached against the upper and lower sides of the bearing block 12 so as to form the clevis loop 13. One end of the said reel shaft 14 is mounted in a bearing in the upper end of the post 10 and the other end of this sand reel shaft 14 is mounted in a bearing formed horizontally in the bearing block 12, and the bearing block 12 carrying the loop 13 is mounted to slide horizontally in the recess in the post 11. The sand reel driving pulley 15 is located upon the shaft 14 in position to contact with the band wheel 6. The hinge member 16 is formed upon the end of a bolt 17 which is inserted through the upper end of the post 11 above the bearing block 12. The clevis 17^a is inserted through the loop 13 and a lever 18 is pivotally mounted between the arms of the yoke 16 and connected to the clevis 17^a by a pin 19. The rock shaft 20 is mounted transversely upon the floor 1, there being a crank arm 21 upon the outer end of the rock shaft and an operating handle 22 upon the inner end. A rod 23 connects the upper end of the crank arm 21 to the lower end of the lever 18.

When the handle 22 is pulled downwardly in the direction indicated by the arrow 24 in Fig. 2 the lower end of the lever 18 is pulled toward the operator, thereby sliding the bearing block 12 toward the operator and bringing the driving pulley 15 into contact with the wheel 6 so that the sand reel 25 will be operated, and when the lever 22 moves upwardly the sand reel driving pulley 15 will be moved out of contact with the band wheel.

I claim:

In a sand reel construction for well rigs, the combination with a knuckle joint post having a horizontal recess formed in its inner face and near its upper end, of a piece of strap-iron bent into a U-shape and fitting in the recess, the ends of the strap-iron being bent toward each other, thus forming a clevis loop; a cast iron bearing block fitting in the clevis loop, said bearing block having a central opening to receive the sand reel shaft; a hinge member formed upon the end of a bolt, said bolt being inserted through the upper end of the knuckle joint post above the bearing block; a clevis inserted through the clevis loop; a lever connected to the clevis and to the hinge member and extending downwardly; a rock shaft mounted transversely upon the floor of the derrick; a crank arm upon the outer end of the rock shaft; a rod connecting the crank arm to the lower end of the lever; and an operating handle upon the inner end of the rock shaft.

ROYAL H. MACHIN.

Witnesses:

CLARENCE J. WILLIAMS,

FLORENCE WILLIAMS.