E. CARROW.

BRAKE FOR LOCOMOTIVE CRANES.

APPLICATION FILED JULY 11, 1919.

1,356,486. Patented Oct. 19, 1920.

Fig. 1.

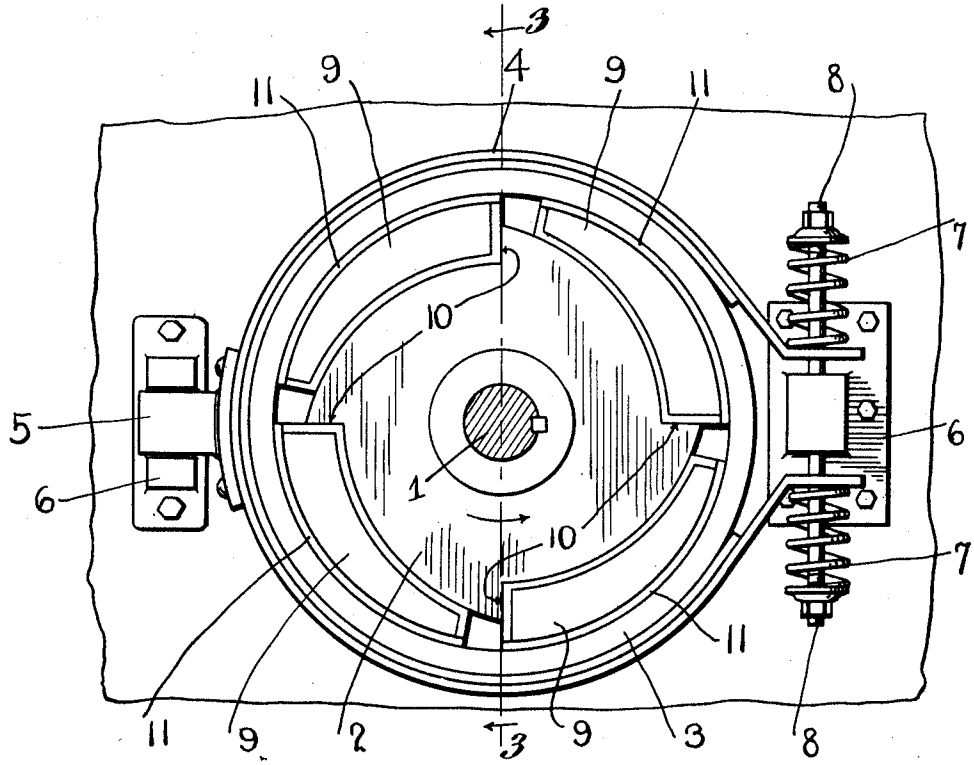


Fig. 2.

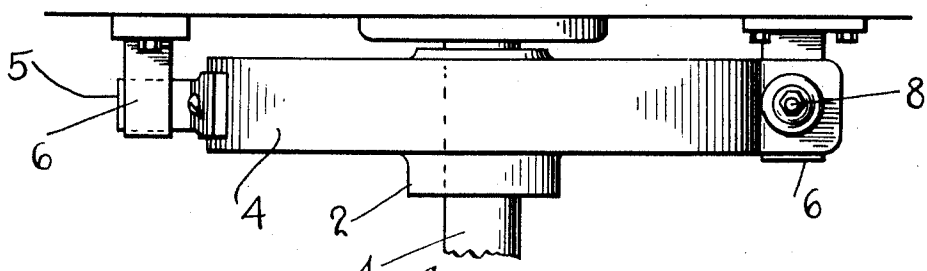
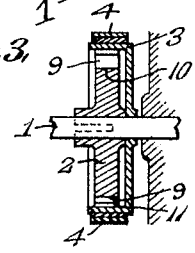


Fig. 3.



WITNESS:

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EDMUND CARROW, OF CHICAGO, ILLINOIS.

BRAKE FOR LOCOMOTIVE-CRANES.

1,356,486. Specification of Letters Patent. Patented Oct. 19, 1920.

Application filed July 11, 1919. Serial No. 310,019.

To all whom it may concern:

Be it known that I, EDMUND CARROW, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Brakes for Locomotive-Cranes, of which the following is a specification.

This invention relates to improvements in brakes for drums and the invention is more particularly adapted for use on drums of cranes for locomotives.

One of the objects of the invention is to provide cam means for frictionally connecting the drum shaft to the brake means when the parts are moved in one direction, but which will permit the parts to freely move in the opposite direction.

The invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claim.

In describing my invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is an end view, with parts in section, of a drum supplied with my invention;

Fig. 2 is a plan view thereof.

Fig. 3 is a sectional view through the device.

In these views 1 indicates the shaft of the hoisting device on which the cable of the boom is wound. This shaft has secured thereon the cam disk 2 which is located within the brake drum 3. This drum is engaged by the brake band 4, in the usual manner, said band being carried by the anchor 5 which engages the anchor block 6. At the split ends of the band the usual springs 7 and adjusting bolts 8 are located so that the band may be adjusted on the drum. Between the inner periphery of the drum and the cam disk 2 I locate the wedge blocks 9. As shown, there are four of these blocks and each of these blocks engages a cam edge on the disk with the side end of each block being located adjacent a radial shoulder 10 located between the cam edges. The outer edges of the wedge blocks are provided with suitable lining material, as shown at 11. It will thus be seen that when the hoisting means and shaft 1 is rotating in the direction of the arrow, the wedge blocks will lie in the deepest part of the cam surfaces so that their linings will not engage the inner periphery of the drum and thus the parts may rotate without hindrance on the part of the drum. When the boom is raised to the desired height the hoisting clutch is withdrawn and should there be any tendency of the boom to drop, this downward motion would give a reverse motion to the shaft and disk so as to force the wedge blocks into the narrower parts of the cam surfaces and thus wedge them between the cam disk and the drum so that the brake band acting on the drum would prevent further movement of the boom. Sufficient tension is placed on the springs 7 so that the drum cannot be moved without power from the engine. When the boom is to be lowered the disk is turned in the opposite direction from the arrow and thus the device will act to prevent the boom from racing ahead of the engine thus causing a jerking motion which sometimes causes the operator to lose control and drop the boom and thus seriously damage the apparatus.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claim.

What I claim is:—

A device of the class described comprising a shaft, a cam disk thereon having cam recesses formed in its periphery, each recess forming a radial shoulder at one end thereof, a drum surrounding the disk, brake means for the drum, curved wedge blocks located in said recesses for engaging the interior periphery of the drum, said blocks having their enlarged ends engaging the shoulders when they are in inoperative position and brake linings on the outer faces of said blocks.

In testimony whereof I affix my signature.

EDMUND CARROW.