



frame by the pull of the lower cables.

In this position the upper cables are sufficiently slack to permit these springs to absorb any shock to which the machine may be subjected.

The simplicity of operation, the

fewness and convenience of the levers are plainly shown in the illustrations.

The operator controls every movement of the machine without changing his position.

## THE ARRANGEMENT OF THE PROPELLING MECHANISM:

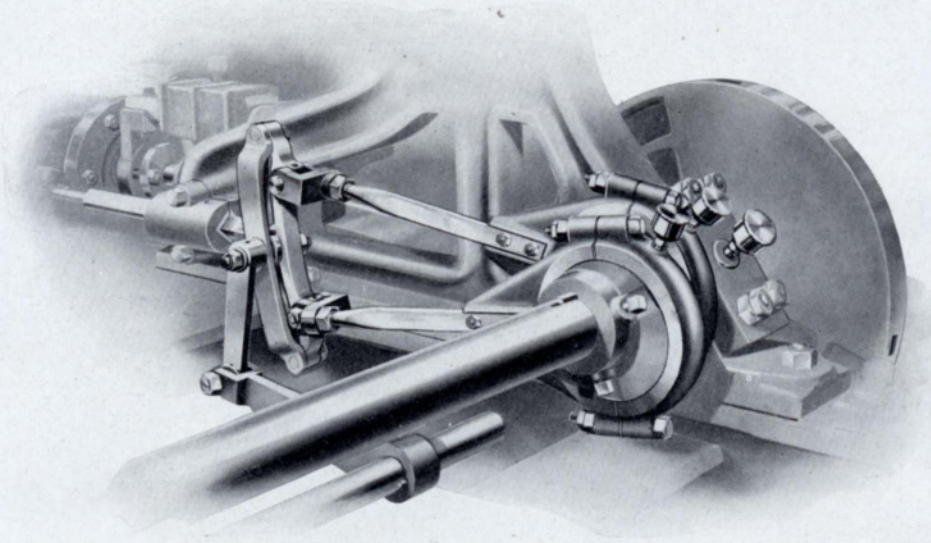
A steel clutch sprocket is mounted on the rear drum shaft of the engine and is connected with a corresponding sprocket on the cross propeller-shaft by means of a heavy double-link, steel sprocket chain.

Near the center of this cross-propeller shaft two sprockets are mounted, each connected by sprocket

connected with the axles of each truck by similar chains and sprockets keyed to the axle.

This arrangement makes it impossible for the sprocket chains to be disarranged by the raising and lowering of the trucks.

After lowering the trucks, the machine is placed in readiness to



Link motion mechanism for reversing engines.

chains with a double sprocket mounted on the wheel-frame shaft.

These double sprockets in turn are

propel itself along the track by throwing into gear the propelling sprocket on the engine shaft.

