(No Model.)

F. C. COFFIN.

LOOSE PULLEY.

No. 303,362. Patented Aug. 12, 1884.

FIG. 1.

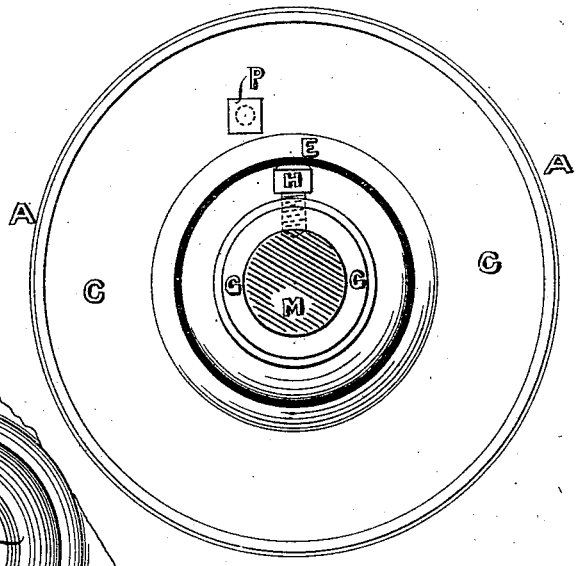


FIG. 4.

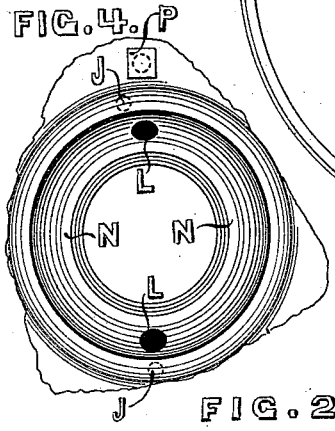


FIG. 2.

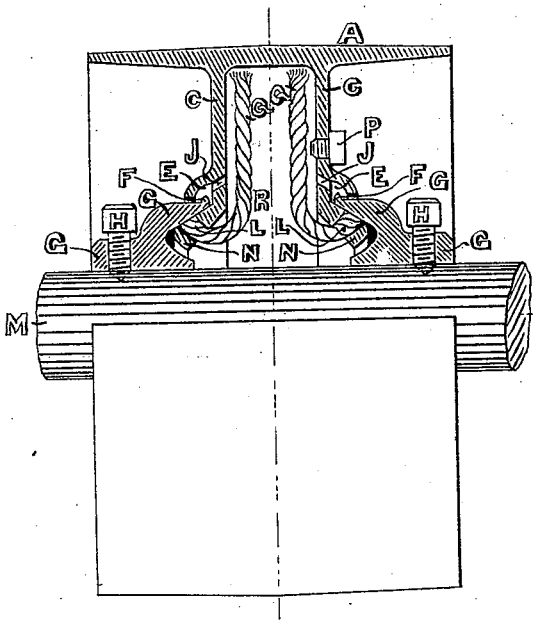
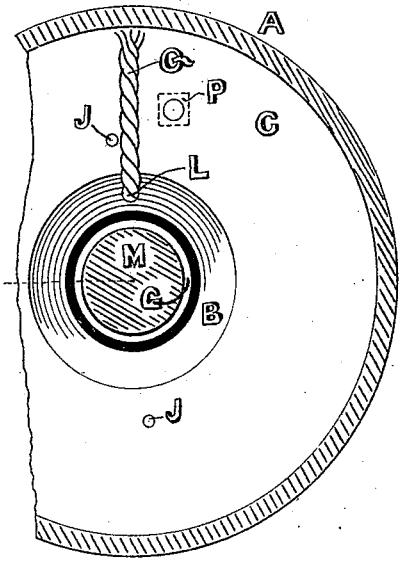


FIG. 3.



WITNESSES.

D. N. B. Coffin

John H. Stevens

INVENTOR.

Freeman Clarke Coffin

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

FREEMAN CLARKE COFFIN, OF BOSTON, ASSIGNOR TO HIMSELF, AND CHARLES D. FISH, OF HYDE PARK, MASSACHUSETTS.

LOOSE PULLEY.

SPECIFICATION forming part of Letters Patent No. 303,362, dated August 12, 1884.

Application filed May 1, 1884. (No model.)

To all whom it may concern:

Be it known that I, FREEMAN C. COFFIN, of Boston, county of Suffolk, and State of Massachusetts, have invented certain new and useful Improvements in Loose Pulleys; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention relates to the construction of the journal-bearings, self-oiling and adjusting devices, &c., and their combination, substantially as and for the purposes set forth, and as hereinafter more fully described.

With reference to the drawings, Figure 1 is an elevation of the pulley and section of shaft viewed in the line of the shaft. Fig. 2 is an elevation of pulley and shaft, the upper half of pulley being in section in a vertical plane coincident with the axis of the shaft. Fig. 3 is a sectional view in the line of the shaft, and is taken in a plane transverse to the axis through the middle of the pulley. Fig. 4 is an elevation viewed in the line of the shaft, showing the journal N, &c.

Like letters refer to the same or corresponding parts in all the figures.

Referring to the drawings, M is the shaft. A is the rim of the pulley.

In place of the usual hub about the shaft are the journals N, of frusto-conical form. These are joined to the rim A, in the usual way, by arms or web; but within the journals N, and, if desired, extending toward the rim, as shown, is formed an annular space, which I use for an oil-reservoir. This space is marked R in Fig. 2. Two collars are fitted to the shaft and marked G G. These have each a concave space fitted to the frusto-conical journals N, and serve as journal-bearings, and may be fastened to the shaft by keys or set-screws, as shown. A small drip-rim, F, is formed about the rim of these journal-bearings.

Upon the connecting part of the pulley, between the journals N and the rim A, are formed the annular drip-cups E, and from drip-cup E are made the return oil-passages J, to conduct the dripping oil back into the oil-reservoir R.

The set-screws for holding the collar journal-bearings G are marked H. An oil-feeding passage, L, is formed in the journals N, leading from the oil-reservoir R to the frictional surfaces of the journals N and their bearings, in which is inserted a suitable capillary conductor or wick, Q Q. This wick is inserted as near as practicable to the outer ends of the journals, as the centrifugal action will tend to distribute the oil toward the inner and larger ends, whence it escapes into the annular drip-cup E, and is conducted back into the oil-reservoir R through the return-passages J.

An oil-hole stopped with the screw or stopper P affords the facility for supplying oil to the reservoir R. This supply needs to be renewed quite unfrequently.

The connecting part between the journals and the rim of the pulley is marked C C.

The set-screws H afford a convenient facility for adjusting to each other the journal-bearings and journals.

The parts may be made of cast-iron or other suitable materials, where not otherwise specified.

I claim—

1. The pulley as constructed with the two frusto-conical journals N, their bearings G G, oil-passages L, wick Q, rim F, annular drip-cup E, oil-passage J, reservoir R, and rim A, substantially as described.

2. The combination and arrangement of journals N, bearings G, oil-passage L, wick Q, and reservoir R, substantially as described.

3. The combination and arrangement of the annular drip-cup E with journals N, bearings G, rim F, and oil-passages L J, and the oil-reservoir, substantially as described.

4. The self-oiling pulley as constructed with two frusto-conical journals and corresponding bearings, substantially as described.

5. In a self-oiling pulley, the journal oil-hole L, the reservoir R, the return oil-hole J, and drip-cup E, substantially as arranged and combined for the purpose set forth.

FREEMAN CLARKE COFFIN.

Witnesses:
D. N. B. COFFIN,
JOHN H. STEVENS.