

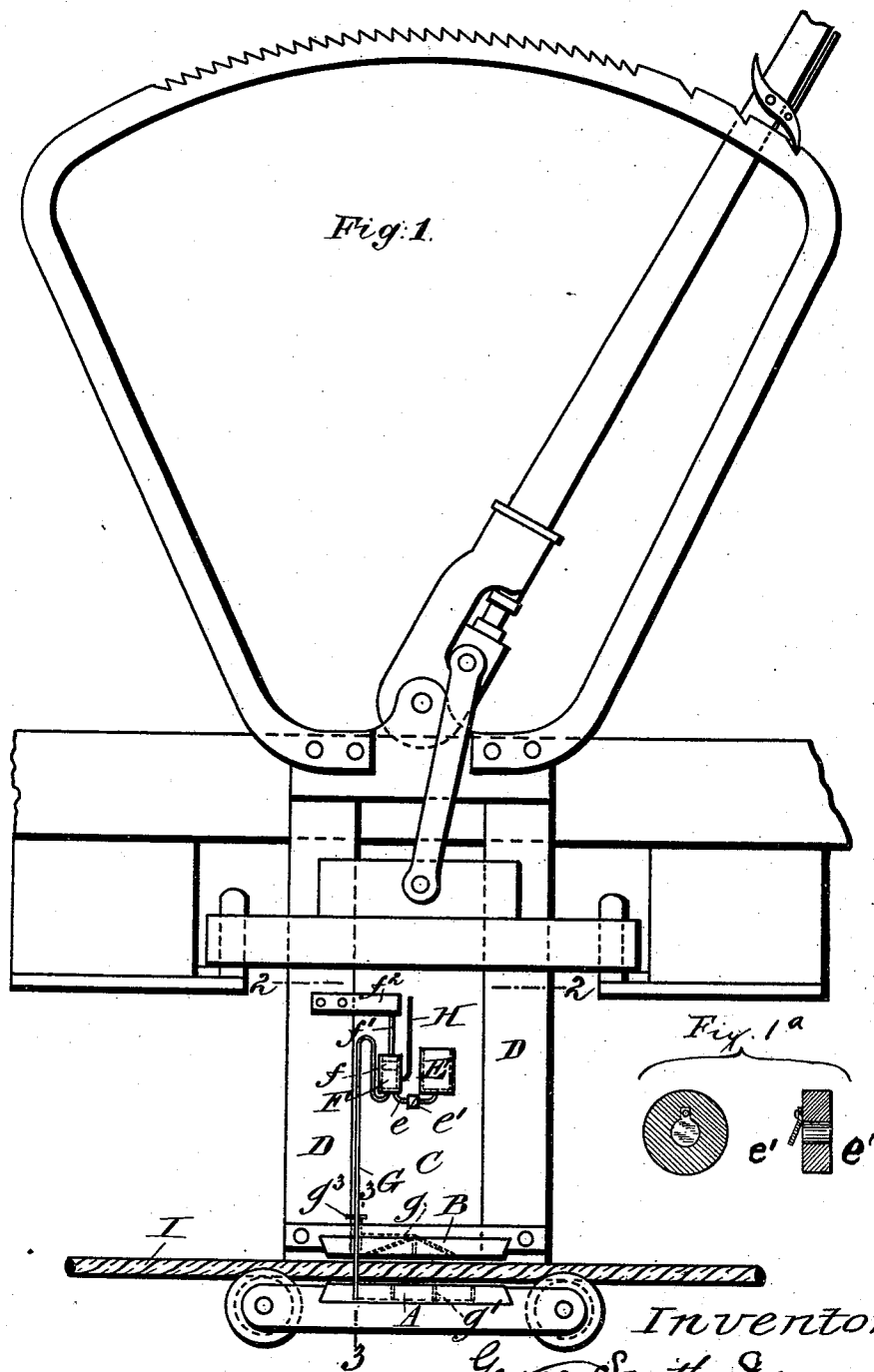
(No Model.)

2 Sheets—Sheet 1.

G. S. DUNCAN.
LUBRICATOR.

No. 473,064.

Patented Apr. 19, 1892.



Witnesses:

E. B. Bolton
H. H. Austin

BY

Inventor:
George Smith Duncan
Richardson

his Attorneys.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

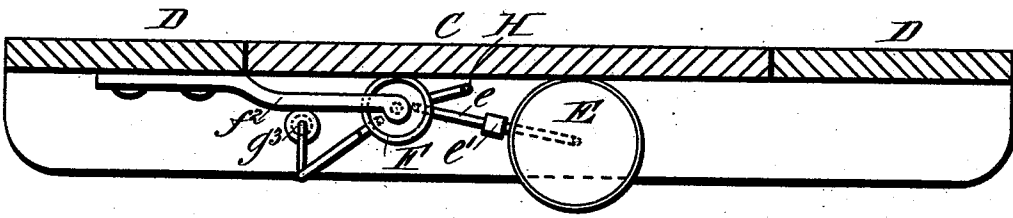
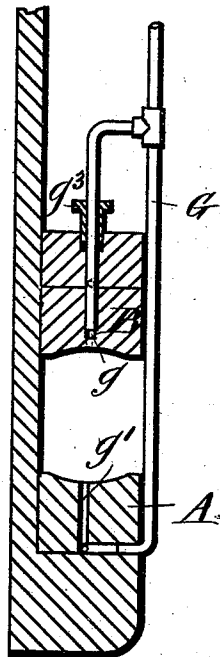


Fig. 3.



Witnesses:
E. B. Bolton
H. Luster

Inventor
George Smith Duncan
By Richard
his Attorneys

UNITED STATES PATENT OFFICE.

GEORGE SMITH DUNCAN, OF MELBOURNE, VICTORIA.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 473,064, dated April 19, 1892.

Application filed January 27, 1891. Serial No. 379,236. (No model.)

To all whom it may concern:

Be it known that I, GEORGE SMITH DUNCAN, a subject of the Queen of Great Britain, residing at Melbourne Chambers, Little Collins Street, Melbourne, in the British Colony of Victoria, have invented a new and useful Improved Lubricator for Cable-Grips, of which the following is a specification.

The object of my invention is to provide means whereby a certain quantity of oil or other lubricant may be supplied to the gripping-surfaces of the dies and cable at the moment when the former are about to close against and grip the latter, partly in order to reduce the friction and therefore the heat generated between said dies and said cable when the latter is being gripped and partly to toughen the steel wires of which said cable is composed by annealing them instead of allowing them to be made brittle by such heat.

Referring to the accompanying drawings, Figure 1 is a side elevation of a cable-gripper of ordinary construction fitted with my improved means for lubricating the gripping-dies and cable, while Fig. 2 is a horizontal section on line 2 2, Fig. 1; and Fig. 3 is a vertical transverse section on line 3 3, Fig. 1. Fig. 1^a shows a front and side sectional view, respectively, of the check-valve.

A represents the lower fixed gripping-die, and B the upper movable one, while C represents the central fixed plate, to which said lower die is secured, and D D represent the two movable side plates, to which said upper die is secured.

E represents a reservoir containing a supply of oil or other lubricant, and F a small cylinder containing a piston *f*. This said cylinder F is, according to my invention, fixed upon the central plate C and communicates, through the pipe G with passages *g g'*, bored or otherwise formed in both dies A B. The piston *f* is connected by a rod *f'* with a bracket *f*², secured upon one of the movable side plates D of the gripper, while a branch from the pipe G projects into a stuffing-box *g*³ upon the upper die B, in order that it may be free to slide up and down through same.

A small air-inlet pipe H is secured to the side of the pump-cylinder F at a certain height above the lower end thereof, so that upon the piston *f* being forced down when the dies A and B are brought together it will simply force air out of said cylinder until near the end of its stroke, when it will cause the oil or other lubricant (which has previously been drawn into the cylinder by its upstroke) to pass down the pipe G and along the passages *g g'*, whereby it will be applied to the surface of the gripping-dies A B, as well as the cable I, just before this latter is gripped, the effect of which will be to provide a film of lubricant around said cable, so as to prevent the wear and tear thereof and at the same time keep same cool, thus materially increasing the "life" of said cable by toughening its steel wires, as above described. The pipe *e*, connecting the reservoir E with the cylinder F, is fitted with a small check-valve *e'*, opening in a direction away from the reservoir E, as shown in Fig. 1^a, which, while allowing the lubricant to be drawn out of said reservoir into said cylinder by the upward movement of the piston *f*, will effectually prevent its return. It will of course be obvious that the amount of lubricant fed to the gripping-dies at each stroke may be regulated by altering the position of the air-pipe H relatively with the stroke of the piston *f* in said cylinder.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

In means for lubricating the gripping-dies and cables of cable tramways, the combination, with cylinder F, piston *f*, working therein, and an air-pipe connected with said cylinder, of an oil-reservoir E, pipe *e*, connecting said reservoir with the cylinder F, and a check-valve *e'*, opening in a direction away from said reservoir, substantially as set forth.

GEORGE SMITH DUNCAN.

Witnesses:

WALTER SMYTHE BAYSTON,
EDWIN WILSON.