

H. WHITELEY.
 Hoisting-Drum and Clutch-Apparatus.

No. 213,366

Patented Mar. 18, 1879.

Fig. 1

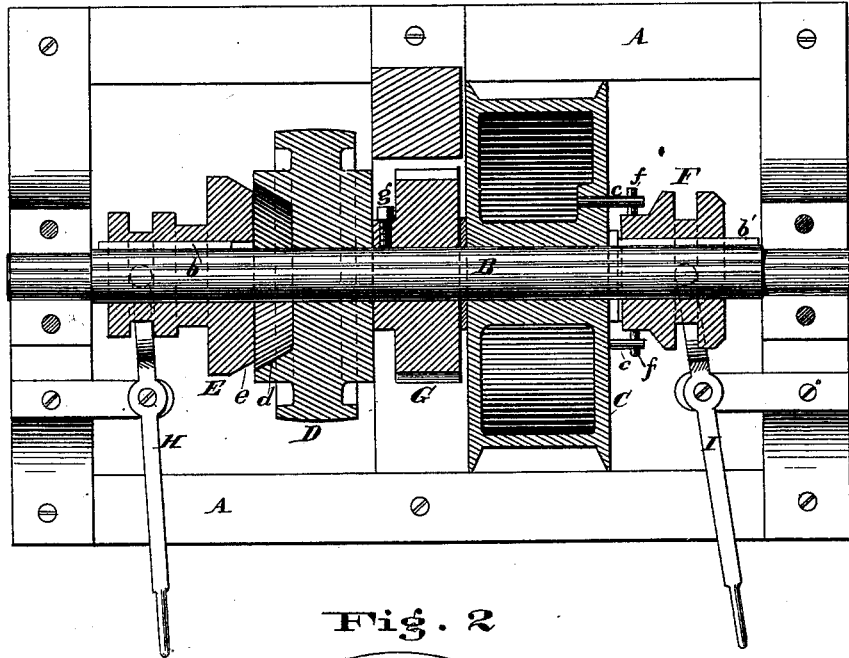


Fig. 2

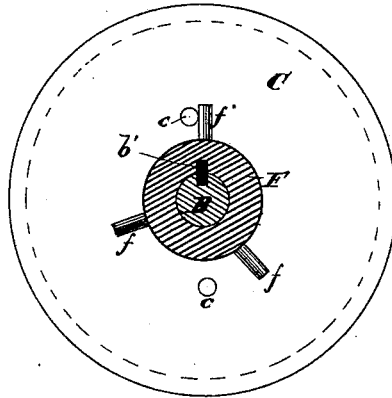


Fig. 3

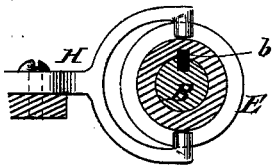
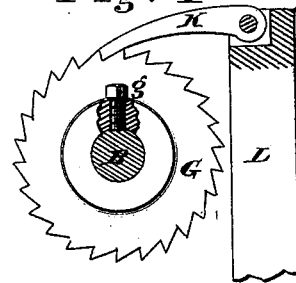


Fig. 4



Attests

R. Schieffelin
R. Schieffelin

Inventor

Henry Whiteley
 by his Attorney
Charles S. Chamberlain

UNITED STATES PATENT OFFICE.

HENRY WHITELEY, OF WILMINGTON, DELAWARE.

IMPROVEMENT IN HOISTING-DRUM AND CLUTCH APPARATUS.

Specification forming part of Letters Patent No. 213,366, dated March 18, 1879; application filed January 30, 1879.

To all whom it may concern:

Be it known that I, HENRY WHITELEY, of Wilmington, county of New Castle, State of Delaware, have invented a new and useful Improvement in Hoisting-Drum and Clutch Apparatus specially designed for elevating galvanized sheets, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a longitudinal section; Figs. 2, 3, and 4, cross-sections at F, *f*, and B.

The object of my invention is to furnish a device by means of which the delicate operation of withdrawing the sheets of coated metal from the bath and their subsequent treatment may be performed with greater precision and cheapness.

This I accomplish by substituting for the device now in use the drum C, revolving freely upon the shaft B, but which may be made to revolve with the shaft by means of the collar F, keyed thereto by a slot and feather, *b'*, but having a free longitudinal motion along it, so that when it is moved toward the drum by means of the lever I its teeth *fff* will engage with the pins *cc* shown upon the sides of the drum. The shaft B, which is prevented from turning in any direction save one by means of the ratchet G and pawl K, is given an intermittent motion, as desired, by the pulley D, driven in the usual manner and running freely upon the shaft as an axle, and which may be made to instantly gripe or loosen the shaft by means of the friction-cones *e* and *d*, attached, respectively, to the pulley D and to the collar E, which is keyed to the shaft, and has longitudinal motion allowed

it by a slot and feather, *b*, and is moved by the lever H in the same manner as the collar F.

It will be seen from the foregoing that when the sheet in the bath is seized by the tongs attached to the rope wound upon the drum C, the lever I being now moved so that the teeth upon the collar F are engaged with the pins upon the side of the drum, it may be raised with a uniform motion by moving the lever H, so that the friction-cones *ed* shall come in contact. When the sheet has been raised to a proper height the cones are disengaged, and it remains suspended, the shaft being prevented from running backward by means of the ratchet and pawl. The surplus metal having been removed and the coating sufficiently set, the lever I is now moved so as to disengage the drum, thereby permitting it to revolve freely upon the shaft and the sheet to fall upon the floor.

My apparatus, though specially adapted for handling galvanized sheets, may obviously be utilized for other analogous purposes.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of the drum C, the pulley D, and the ratchet and pawl G and K, together with the clutches E and F, all arranged upon the shafting B, substantially as shown and described.

HENRY WHITELEY.

Witnesses:

J. J. MCMULLEN,
W. H. MORRIS.