J. H. HOUGH.

CARRIAGE FOR WIRE DIE HOLDERS.

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1,051,889.

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Fig. 1.

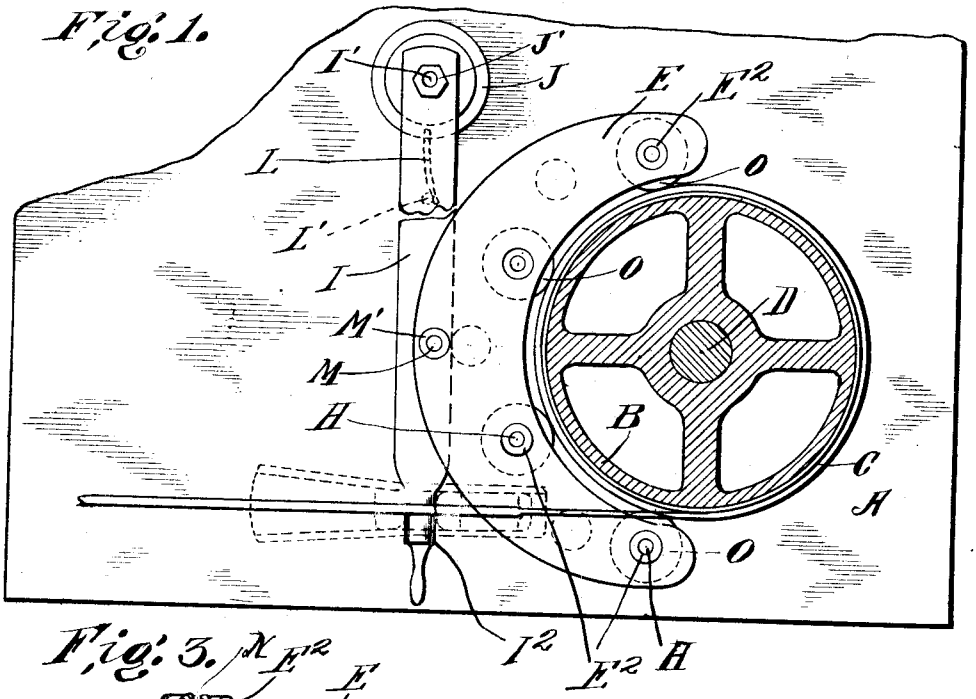

Fig. 3.

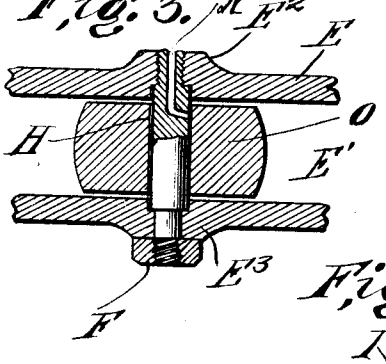

Fig. 2.

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Witnesses

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UNITED STATES PATENT OFFICE.

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CARRIAGE FOR WIRE-DIE HOLDERS.

1,051,889. Specification of Letters Patent. Patented Feb. 4, 1913.

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To all whom it may concern:

Be it known that I, JOSEPH HOWARD HOUGH, a citizen of the United States, residing at Torrington, in the county of Litchfield and State of Connecticut, have invented certain new and useful Improvements in Carriages for Wire-Die Holders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in anti-friction carriages for wire die holders for use in connection with wire drawing apparatus and the object in view is to produce a simple and efficient apparatus of this nature which will prevent the wire drawing drum from springing and appreciably reducing the friction upon the apparatus incident to the drawing of the wire.

Heretofore in the art to which this invention pertains, it has been the common practice to fasten the die holder upon the table or bed of the machine, there being no connection between the drum and said holder, whereas in the present invention it is my practice to remove the die holder from the table and place it upon a portion of an operating lever forming an arbor and attach the yoke or carriage carrying the anti-friction roller wheels upon the lever, the wheels of the carriage being adapted to ride upon the drum and, when wire is being drawn, the drum will have a solid bearing, thus preventing springing of the shaft upon which the drum is mounted.

My invention is illustrated in the accompanying drawings, in which:—

Figure 1 is a top plan view showing the application of my invention, the drum being shown in section. Fig. 2 is a side elevation of the carriage and drum, and Fig. 3 is a sectional view on line 3—3 of Fig. 2.

Reference now being had to the details of the drawings by letter, A designates the table positioned a slight distance underneath the wire winding drum B which is shouldered as at C and mounted upon the shaft D, vertically disposed and rotated in any suitable manner not shown. A carriage comprising two semi-cylindrical plates E and E′ is provided, having bosses E^2 upon the plate E and similar bosses E^3 upon the plate E′. A spindle H has its upper end contracted and circumferentially threaded and fits in an aperture in the plate E. The lower end of the spindle, which is contracted, passes through an aperture in the plate E′ and is engaged by a nut F engaging the threaded circumference of said spindle. An oil duct N is formed in said spindle with its lower end opening through the circumference of the spindle which forms a bearing for the anti-friction wheel O. The anti-friction wheels which are mounted upon the carriage are preferably convexed and adapted, when in operative position, to contact with the circular outlined groove Q formed in the circumference of the drum near its lower end, as shown in Fig. 2 of the drawings. The plate E′, which forms the lower portion of the carriage, is provided with legs R to each of which is pivotally mounted a caster wheel R′ adapted to rest upon the table and form a means for supporting the carriage in proper position.

A lever I is pivotally mounted upon a bolt I′ carried by the boss J, the lever being held upon the bolt by means of a nut J′. Said lever is pivotally connected to the plates E and E′ through the medium of the pin M which passes through registering apertures in the plates and which plates have, projecting from their inner faces about the apertures through which the pin M passes, bosses M′. A spring L is fastened at one end to the boss and its other end bears yieldingly against a pin L′ upon the lever I, the office of which spring is to normally throw the carriage away from or out of contact with the drum to allow the coil of wire to fall to the table after it has been drawn.

In operation, the parts are preferably adjusted as shown in the drawings and, as the wire winds about the lower portion of the drum and is drawn through the die, the carriage bearing frictionally against the drum will tend to reinforce the same against the heavy strain and relieve the shaft upon which the drum is mounted, preventing the same from springing. The die holder having a loosely mounted connection with the arbor portion of the lever will be allowed to adjust itself to the drum and, when a wire has been drawn and pressure relieved from the carriage, the spring will tend to throw

the lever and the carriage which is connected thereto back from the drum and allow the wire to fall upon the table beneath.

What I claim to be new is:—

1. In combination with an anti-friction carriage for die holders in wire drawing machines, anti-friction wheels carried thereby and adapted to contact with the circumference of a drum, a movable lever for operating the carriage, and a die holder mounted upon said lever, as set forth.

2. In combination with an anti-friction carriage for die holders in wire machines, caster wheels for supporting said carriage, a movable lever for operating the carriage, and a die holder mounted upon said lever, as set forth.

3. In combination with a carriage for die holders in wire drawing machines, said carriage being made up of two curved plates spaced apart, anti-friction wheels mounted between the plates and adapted to bear against the wire drawing drum, a table, a lever pivoted thereto and having pivotal connection with said carriage, and a die holder loosely mounted upon the lever, as set forth.

4. In combination with a carriage for die holders in wire drawing machines, said carriage being made up of two curved plates spaced apart, anti-friction wheels mounted between the plates and adapted to bear against the wire drawing drum, a table, a spring-pressed lever mounted upon the latter, a portion of the lever forming an arbor, and a die holder loosely mounted upon the arbor, as set forth.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

JOSEPH HOWARD HOUGH.

Witnesses:
CHARLES D. DOTY,
RANDOLPH E. DOTY.