

(No Model.)

J. A. McDOWELL-GUAJARDO.
LUBRICATING DEVICE FOR THE TOP AND BOTTOM ROLLERS OF
SPINNING OR OTHER FRAMES.

No. 431,779.

Patented July 8, 1890.

Fig. 1.

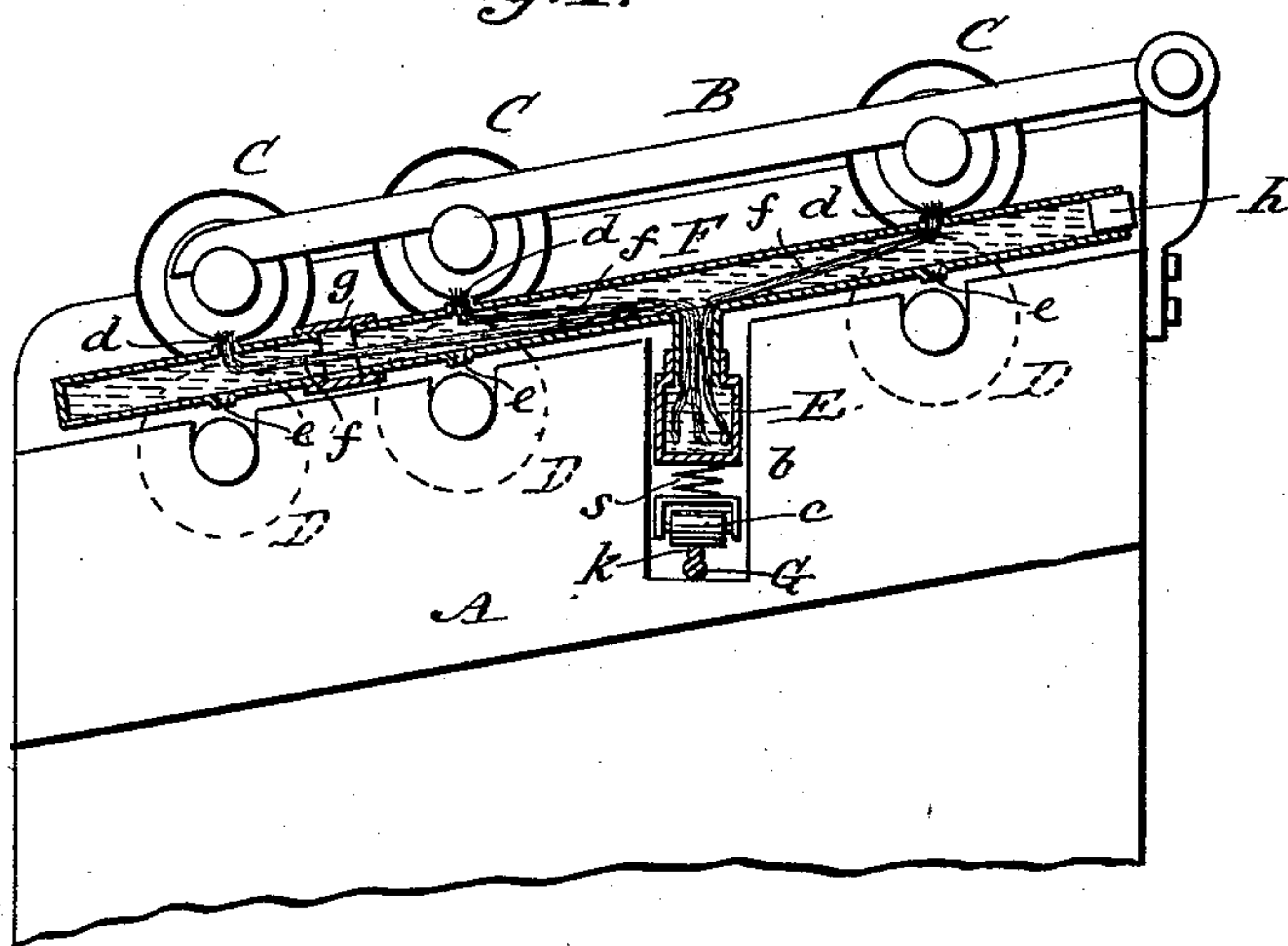


Fig. 3.

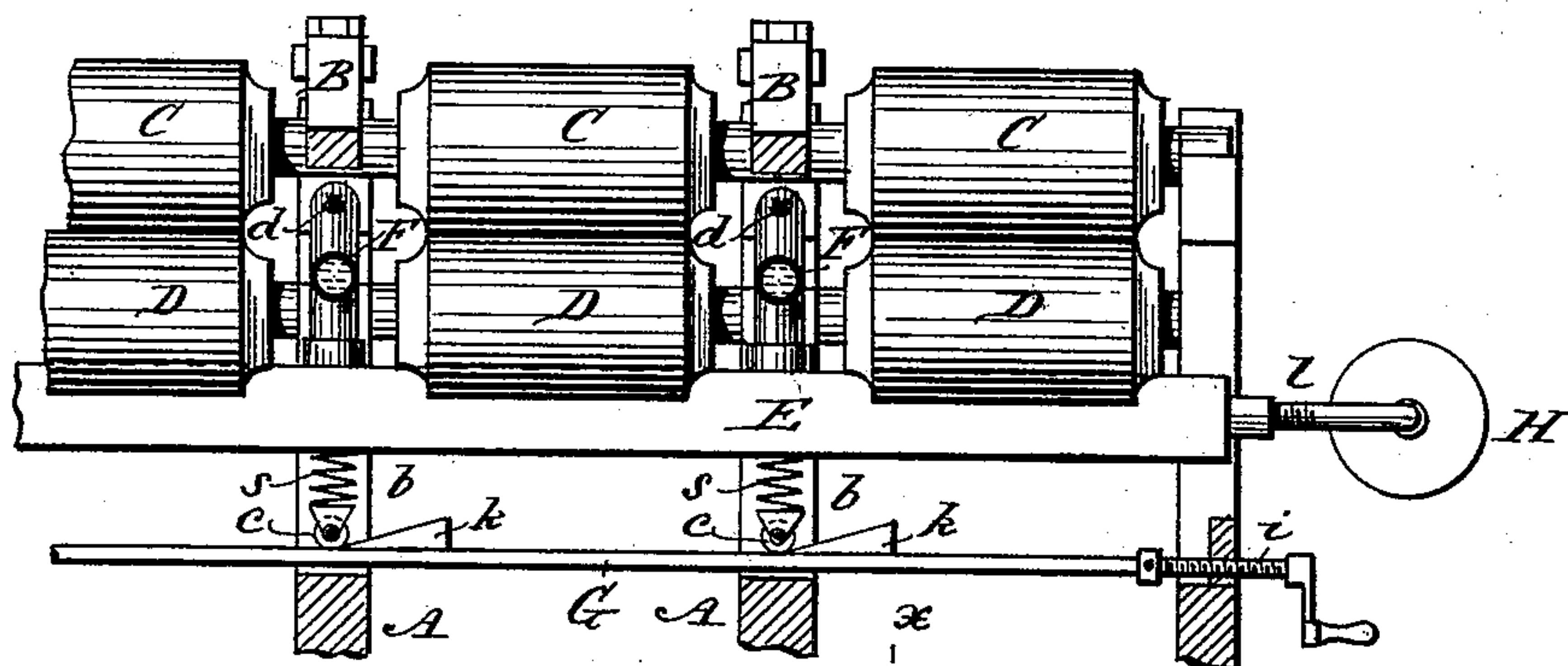
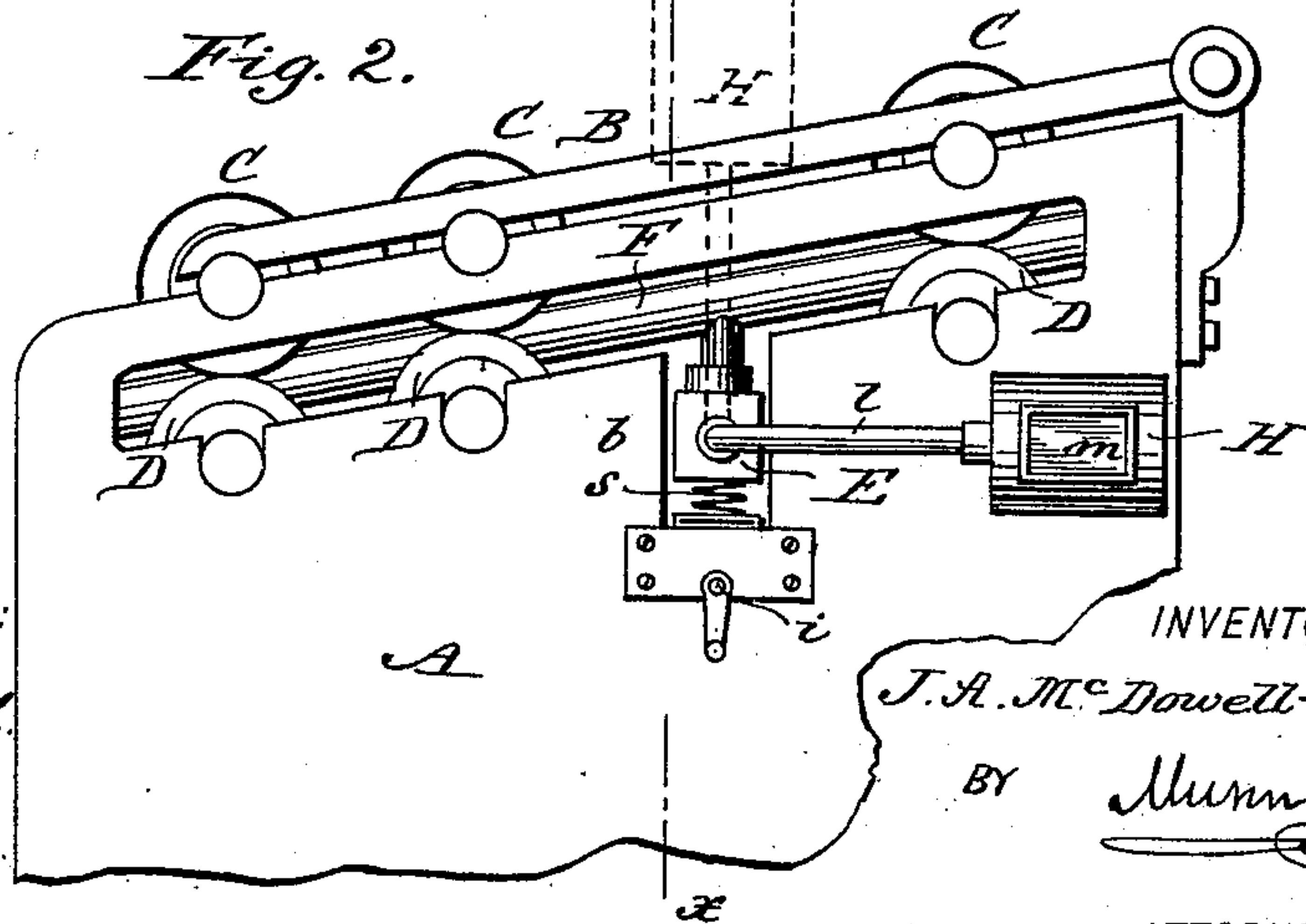


Fig. 2.



WITNESSES:

D. C. Reusch.
C. Sedgwick

INVENTOR:

J. A. McDowell-Guajardo.

BY

Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOSÉ ALBERTO McDOWELL-GUAJARDO, OF SALTILLO, COAHUILA, MEXICO.

LUBRICATING DEVICE FOR THE TOP AND BOTTOM ROLLERS OF SPINNING OR OTHER FRAMES.

SPECIFICATION forming part of Letters Patent No. 431,779, dated July 8, 1890.

Application filed October 14, 1889. Serial No. 326,917. (No model.)

To all whom it may concern:

Be it known that I, JOSÉ ALBERTO McDOWELL-GUAJARDO, of Saltillo, Coahuila, Mexico, have invented a new and useful Improvement in Lubricating Devices for the Top and Bottom Rollers of Spinning and other Frames, of which the following is a full, clear, and exact description.

This invention relates to devices for lubricating the top and bottom rollers of spinning, slubbing, and drawing frames; and it consists in certain novel means for such purpose, substantially as hereinafter described, and pointed out in the claims, and whereby the covers of such rollers are protected from being soiled by the lubricant, thereby adding to their durability, and the oil or lubricant used and the labor required to effect the necessary lubrication are economized.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents an end elevation of the roller-stand portion of a spinning-frame of the inclined type, with top and bottom rollers and my improved lubricating means in part and shown in section applied. Fig. 2 is a further end elevation of the same, including certain of the lubricating means not shown in Fig. 1; and Fig. 3 is a longitudinal sectional elevation mainly upon the line *x x* in Fig. 2.

A A indicate the roller-stand portions of the frame, and B the upper guide-bar, provided with the usual bearings in them for the upper and lower front, middle, and back rollers C C C and D D D.

Arranged within openings *b* in the stand is a square or other suitably-shaped oil-tube E, extending the whole length of the frame. This tube rests upon spiral springs *s s*, beneath each of which is a small roller *c*. Connected with the tube E, as by upper necks between each two sets of upper and lower rollers C D and in transverse relation with the tube E, is an inclined tube F. These tubes F virtually form the lubricating-tubes for the upper and lower rollers C D, and are each provided with upper apertures *d* and lower apertures *e* for passage of the oil to the bearings of the front, middle, and back top and bottom rollers, the supply of lubricating material being furnished

through the upper apertures *d* for oiling the top rollers by wicks *f*, which are drawn through said apertures and pass within and along the tube F and down into the tube E. The bottom, front, middle, and back rollers are supplied direct with oil through the apertures *e*, which should be made very small.

Each tube F is of sectional construction, being divided transversely at a suitable point in its length, and the two sections united by a screw-threaded coupling *g*, whereby said tube may be lengthened or shortened according to the distance of certain of the rollers apart. Furthermore, each tube F, which may be permanently closed at its one end, is open at its other end to provide for the insertion and drawing by a suitable hook of the wicks *f* into position, after which said open end of the tube is closed by a plug *h*.

G is a rod arranged beneath and parallel with the tube E, and capable of being slid in direction of its length by means of an attached screw *i*, working through a suitable box and provided with a handle for turning it. This rod or slide G is constructed or fitted with a series of cam-like or wedge-shaped projections *k*, which, when said rod is slid forward, act under the smaller rollers *c* to lift the oil-tube E through the interposed springs *s*, and, together with said tube, to correspondingly raise the lubricating-tubes F. This serves to simultaneously oil all the top rollers C, and the springs *s* operate to give elasticity to the tube E and its superincumbent tubes F. Upon reversing the motion of the screw *i* said tubes E and F are automatically lowered again.

The wicks *f* draw the oil by capillary attraction, but occasionally it is necessary to give a hydrostatic pressure to the supply. This is done by or through the instrumentality of an oil-reservoir H, connected by a swinging joint-pipe *l* with the end of the tube E, said reservoir being then swung to occupy an approximately vertical position, as shown by dotted lines in Fig. 2, and in this operation oil is passed through the small apertures *e* in the tubes F to lubricate the lower rolls D. The normal position, however, of this reservoir H is that of an approximately horizontal one, as shown by full lines in Fig. 2, and on a level with the tube E to provide against any

excessive flow of oil, and it may be fitted, as shown, with a glass *m* on its one side for the purpose of observing the level or position of the oil therein and in the tube E.

5 The tubes F extend under all the bearings of the top rollers C, but only require the small holes *e* in their bottoms when, as in the present illustration, for instance, the stand is made to provide for oiling the necks of the
10 bottom rollers as well. While the invention provides for oiling any number of rollers in the same line, or two lines of rollers on both sides at the same time by a single rod or slide G, it will be obvious that a single set or line
15 of rollers may be independently oiled by separate lubricating devices of the same construction, but capable of independent operation, and the means used for elevating the tube E may be any other suitable mechanical contrivance than the rod G with its inclines or
20 cams *k*.

Any suitable fibrous material may be used to form the wicks or capillary conductors *f*, and various changes in the position and adjustment within the stand of the tubes E and F
25 may, without departing from the spirit of the invention, be made to accord with the particular frame or machine to which my improved lubricating means are applied.

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

1. In lubricating devices for the rollers of spinning and other like frames, the combination,
35 tion, with the rollers to be lubricated, of a transversely-arranged lubricating or wick-holding tube provided with wick-outlets in its upper surface, a connected oil receptacle or tube beneath adapted to receive the lower

ends of a series of lubricating-wicks, and 40 means for raising and lowering the whole relatively to the rollers, substantially as and for the purpose herein set forth.

2. The combination, with the top and bottom rollers of a spinning or other like frame, 45 of one or more lubricating or wick-holding tubes F, having wick outlets or orifices *d* in their upper surface and discharge-holes *e* in their lower surface, the oil receptacle or tube E beneath the said tube or tubes F in tubular connection with each other, and means for
50 raising and lowering the whole relatively to the rollers, essentially as specified.

3. In lubricating devices for the rollers of spinning and other like frames, the combination, 55 with the stand or frame and with the rollers to be lubricated, of the wick-holding apertured lubricating-tubes F, the lower oil-carrying tube E in transverse arrangement with the tubes F, but in tubular connection
60 therewith, means for raising and lowering said tubes relatively to the roller, and the reservoir H in tubular connection with the tube E, and made capable of being elevated or lowered, as required. 65

4. In lubricating devices for the rollers of spinning and other like frames, substantially 70 as herein described, the combination, with the wick-holding apertured tubes F and the oil-carrying tube E in tubular connection therewith, of spring-supports applied to said tube E and means for raising and lowering the whole relatively to the rollers, as set forth.

JOSÉ ALBERTO McDOWELL-GUAJARDO.

Witnesses:

ANTONIO FARGA,
ED GABRIEL.