

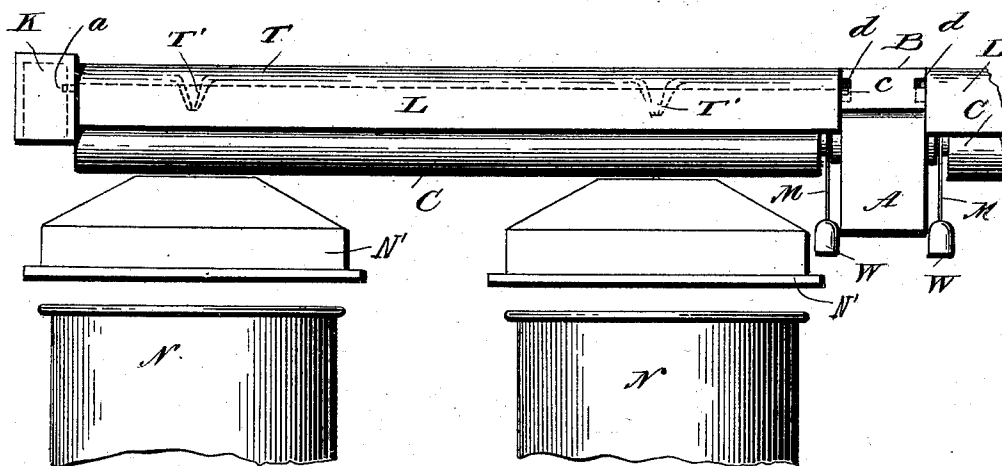
(No Model.)

C. S. ROBINSON.
DRAWING FRAME.

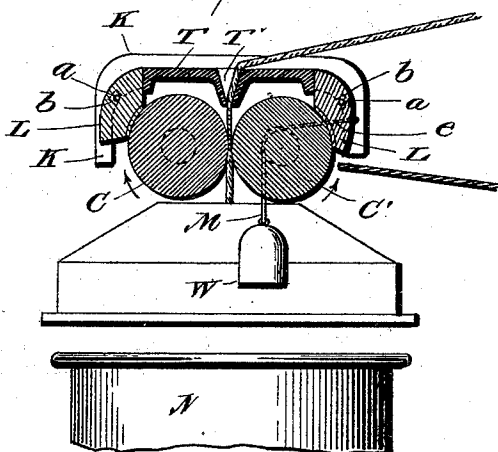
No. 505,371.

Patented Sept. 19, 1893.

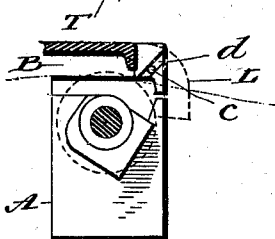
~~Exp. I.~~



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Exp. 3.



Witnesses:

L. C. Hills
Eureka, Idaho

Inventor

Charles S. Robinson
by Marcellus Bailey
his Attorney

UNITED STATES PATENT OFFICE.

CHARLES S. ROBINSON, OF LONSDALE, RHODE ISLAND.

DRAWING-FRAME.

SPECIFICATION forming part of Letters Patent No. 505,371, dated September 19, 1893.

Application filed June 20, 1893. Serial No. 478,263. (No model.)

To all whom it may concern:

Be it known that I, CHARLES S. ROBINSON, of Lonsdale, in the State of Rhode Island, have invented a certain new and useful Improvement in Drawing-Frames, of which the following is a specification.

My invention has been designed with more particular reference to the needs of coiler drawing frames; and it relates to the clearer for the calender rolls of such frames.

Under my invention I pass the sliver directly from the trumpets to the calender rolls; I arrange the clearer, or rather clearers,—since I use two clearer strips or plates—so that they shall effectually cover the exposed parts of the calender rolls—these clearers being placed upon the opposite longitudinal edges of the trumpet plates, and they further are so held as to be capable of removal and replacement, while the machine is running and without interfering with the operation of the other parts, giving sure protection to the slivers, and requiring almost no care or attention on the part of the operator. It is in this combination and arrangement of instrumentalities that my invention is comprised.

The nature of my improvement and the manner in which the same is or may be carried into effect will be readily understood by reference to the accompanying drawings in which—

Figure 1 is a front elevation of so much of a coiler drawing frame as needed for the purpose of explanation—representing the application thereto of my invention in its preferred form. Fig. 2 is a cross section of the same partly in end elevation. Fig. 3 is a side elevation of one of the intermediate bearings of the frame.

The front and rear calender rolls are shown at C C'; but one complete set is shown, supported in the end bearing K, and the intermediate bearings A, B. Where, as is usual, there are a number of sets, they extend from side to side of the machine, the intermediate sets being supported in intermediate bearings A, B. The cans are shown at N; the coiler tops at N'—all constructed and arranged to operate in the usual manner.

T is the trumpet plate placed directly above and extending lengthwise of the calender rolls, and supported by the end bearing K and in-

termediate bearing A B; in it are formed the trumpets T' for passage of the sliver from the front drawing rolls (not shown) to the calender rolls.

Against each longitudinal edge of the trumpet plate is fitted a clearer L, which rests upon the calender roll with which it is intended to co-operate, having its curved inner face which rests upon the roll armed or covered with cloth; each clearer overhangs and effectually covers the exposed portion of its roll. Each clearer extends the length of the trumpet plate and is supported in the bearings K and A B. For this purpose it has on one end a pin *a* which fits in an inclined notch *b* cut in the inner face of the portion of the bearing K by which it is carried, and on the other end a pin or stud *c* which enters and fits an inclined slot *d* in the intermediate bearing A B, the notch and slot being inclined in such direction that as the clearer tends to drop slightly by its weight, it will be forced into closer contact with the calender roll. For the same purpose each clearer may be provided with a weight W, hung from a weight strap M, held in a groove or slot *e* in the clearer, and passing over and down upon the inner side of the axle of the calender roll. The adjustment is such that the joint between the trumpet plate and each clearer is a tight one, and that the top of the clearer at the joint is flush with the top of the trumpet plate. In this way the outside of the clearer can be kept perfectly clean with entire ease, all that is needed being to wipe or dust it off from time to time with a brush or cotton waste. At the same time the clearer can be removed easily whenever necessary, this being made feasible by the arrangement of the joint. All that is required for this purpose is to lift the pin *c* out of its slot *d*, after which the pin *a* can readily be withdrawn from its notch *b*, and with the same ease and expedition the clearer can be replaced.

This improvement with such mechanical changes as will readily occur to those skilled in the art is applicable to any and all drawing frames having a coiler attachment.

I desire it to be understood also that I do not limit myself to the particular form of joint between the clearers and their supporting frame or bearings. This can be modified and

changed considerably without departure from my invention.

Having now described my improvement and the best way known to me of carrying the same into effect, what I claim herein as new and of my own invention is—

1. The combination with the calender rolls and trumpet plate of clearers placed in front and rear respectively of the trumpet plate and detachably connected to their supporting frame or bearings, so as to be removable and replaceable, substantially as and for the purpose hereinbefore set forth.

2. In combination with the calender rolls

and trumpet plate, the clearers fitting against the front and rear edges of said plate and overhanging the exposed portions of said rolls, and supported in bearings inclined in a direction to cause them to tend by their weight to hug or press toward their respective rolls, substantially as and for the purposes hereinbefore set forth.

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

CHARLES S. ROBINSON.

Witnesses:

CHARLES W. THORNTON,
JESSE H. HOWES.