(No Model.) 2 Sheets—Sheet 1.

M. H. CRAM.

ENTERING GUIDE FOR CALENDERING ROLLS.

No. 333,283. Patented Dec. 29, 1885.

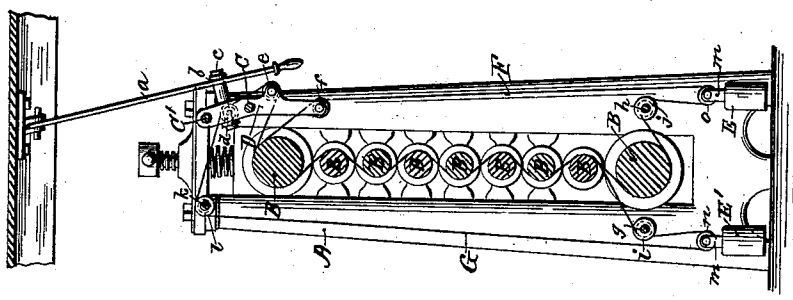


FIG. 3.

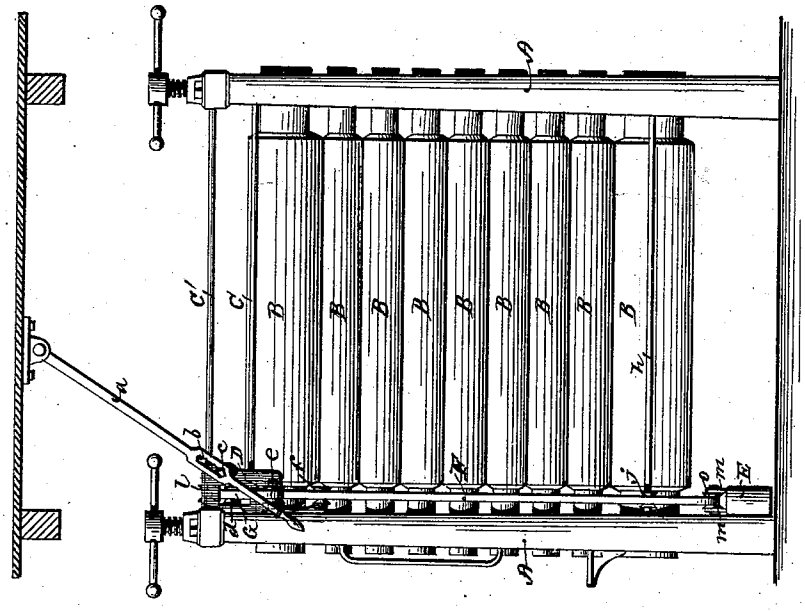


FIG. 2.

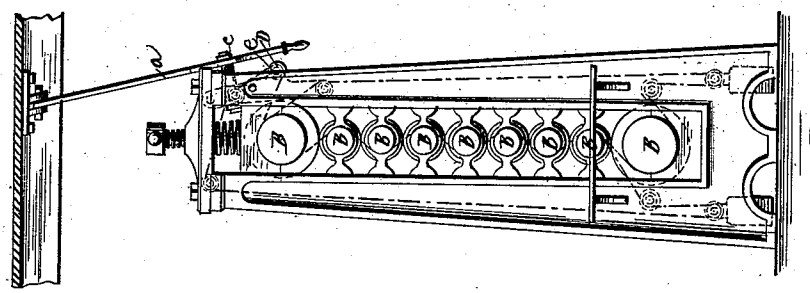


FIG. 1.

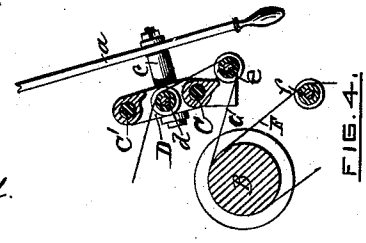


FIG. 4.

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(No Model.)

2 Sheets—Sheet 2.

M. H. CRAM.

ENTERING GUIDE FOR CALENDERING ROLLS.

No. 333,283. Patented Dec. 29, 1885.

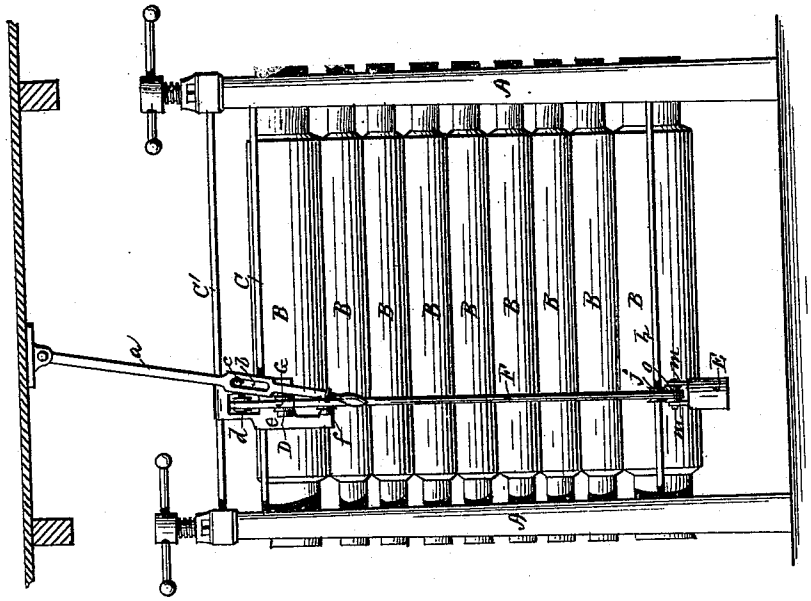


FIG. 6.

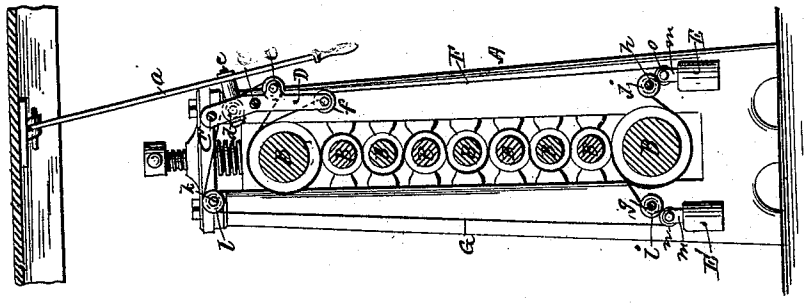


FIG. 5.

WITNESSES:

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UNITED STATES PATENT OFFICE.

MADISON H. CRAM, OF PAWTUCKET, RHODE ISLAND.

ENTERING-GUIDE FOR CALENDERING-ROLLS.

SPECIFICATION forming part of Letters Patent No. 333,283, dated December 29, 1885.

Application filed July 24, 1885. Serial No. 172,585. (No model.)

To all whom it may concern:

Be it known that I, MADISON H. CRAM, of Pawtucket, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Entering-Guides for Calender-Rolls, of which the following is a specification.

Heretofore it has been a comparatively difficult and dangerous operation to thread the calender-rolls of a paper-machine or of a cloth-calendering machine; and the object of my invention is to provide a simple and efficient means for guiding the paper or cloth between the rolls with certainty and precision; and it consists in the combination, with the set of calender-rolls, of two narrow endless belts passing together between the rolls, and means for shifting the location of the belt along the rolls, as hereinafter fully set forth.

Figure 1 is an end elevation of a set of calender-rolls provided with my improvement. Fig. 2 is a rear elevation of the same. Fig. 3 is a vertical section taken in the line of the inner face of the bearing-standard, showing the endless belts in their normal position upon the smaller end portions of the rolls. Fig. 4 is a vertical section of the belt-carriage, taken in the line of the belts. Fig. 5 is a vertical section taken in the same plane as in Fig. 3, showing the belts running upon the large diameter of the rolls. Fig. 6 is a side elevation showing the belts in the same position as Fig. 5.

In the accompanying drawings, A A are the bearing standards, in which the rolls B B B are placed one above the other with their peripheries touching each other. The upper ends of the standards A A are connected by means of the parallel guide-rods C C', upon which is placed the sliding belt-carriage D, a sliding movement being imparted to the carriage along the rods by means of the pivoted shipper-handle *a*, provided with a slot, *b*, which embraces the smaller outer end of the stud *c* projecting from the carriage. The carriage D is provided with the loose belt-carrying pulleys *d*, *e*, and *f*, which revolve upon suitable pins or studs; and upon the rods *g* and *h*, which extend from one of the bearing-standards to the other, near the base of the same, are placed the loose belt-carrying pulleys *i* and *j*, the said pulleys being made capable of a sliding movement along the rods; a also upon a rod, *k*, which extends from one the bearing-standards to the other at the sar height and parallel with the guide-rod C', placed the loose pulley *l*. The weight E provided with the upright ears *m m*, betwe which is pivoted the loose pulley *o*, and t opposite weight, E', is in like manner pi vided with the loose pulley *n*. The narr endless guide-belt F, when in its normal po tion, as shown in Fig. 3, passes from the c riage-pulley *f* over the smaller end portion the top roll B, thence downward from side side between the smaller end portions of t rolls and under the bottom roll B, ther over the loose pulley *j* upon the rod *h*, th under the loose pulley *o* of the weight E, a upward to the pulley *f*. The narrow endl belt G, which runs over the rolls B in cont with the belt F, passes from the roll *e* of t carriage D over the smaller portion of t top roll B in contact with and above the b F, thence downward with the belt F fr side to side between the rolls B and outwa over the loose pulley *i* upon the rod *g*, the under the pulley *n* of the weight E' and ward to the loose pulley *l* upon the rod *k*, a thence over the loose carriage-pulley *d* to pulley *e*, the belts F and G moving uniform in the same direction between the rolls B B

In guiding the paper or cloth into the c ender-rolls the belts F and G are first to moved from the smaller to the larger port of the rolls by the lateral movement of carriage D, by means of the shipper *a*, shown in Figs. 5 and 6. The paper or cl is then to be fed forward between the guidi belts F and G, and upon the completion of passage through the rolls the carriage D i be moved back to its normal position, guiding-belts being thus carried from the lar to the smaller portion of the rolls B B, the sulting slack of the belts F and G being tal up by the action of the weights E and E'. calender-rolls will thus be rapidly threa without danger to the workmen.

The belt G, instead of running directly u the belt F, may run side by side with the sa if preferred.

I claim as my invention—

1. The combination of a set of calen rolls with the endless belts running from o

site sides together between the rolls, and adapted for movement to and from the larger diameter of the rolls, substantially as and for the purpose specified.

2. The combination of a set of calender-rolls with the endless belts, the sliding carriage adapted for guiding the endless belts along the surface of the rolls, and the weights adapted to compensate for the larger and smaller diameter of the rolls, substantially as described.

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Witnesses:
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