

(No Model.)

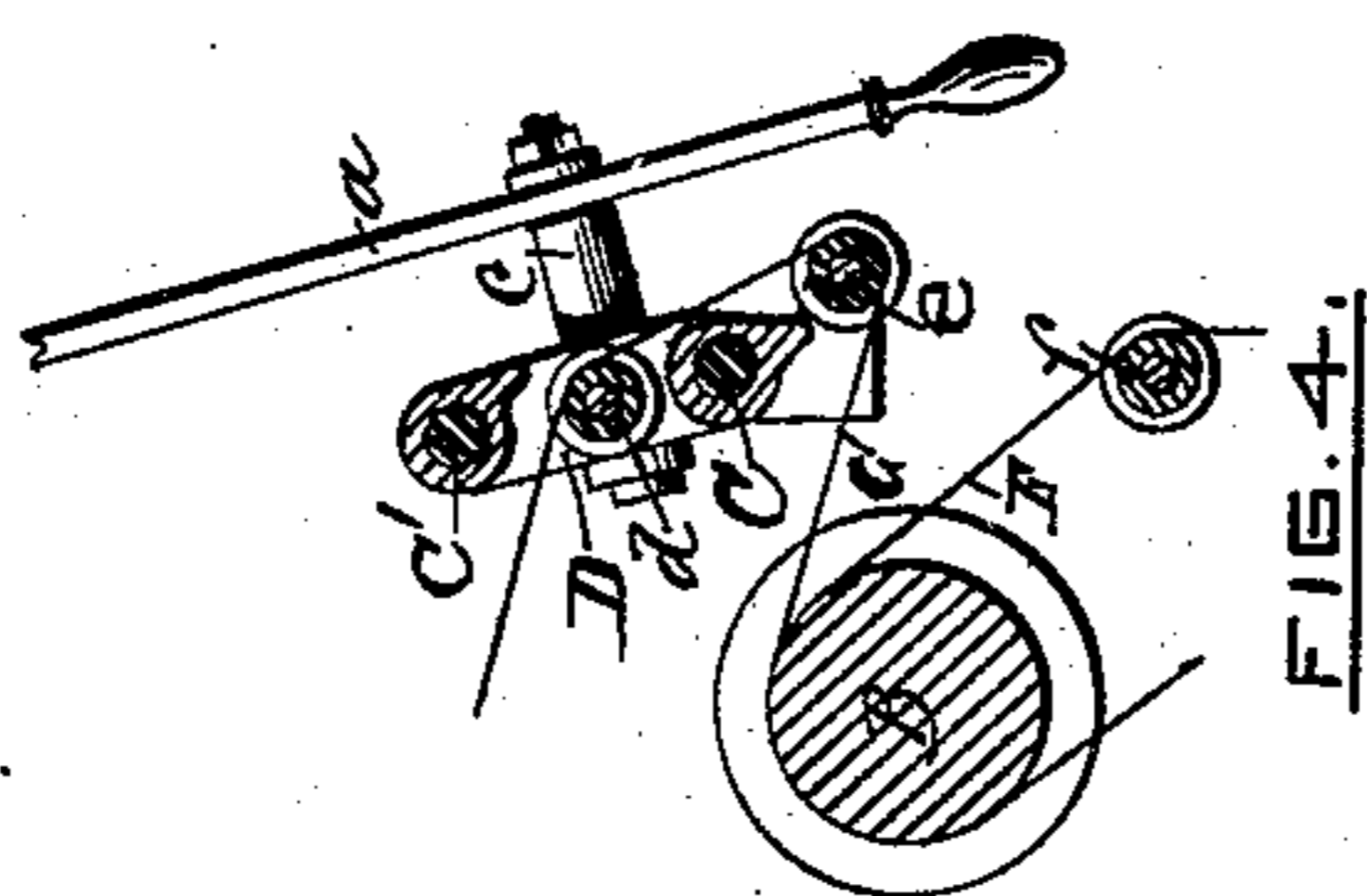
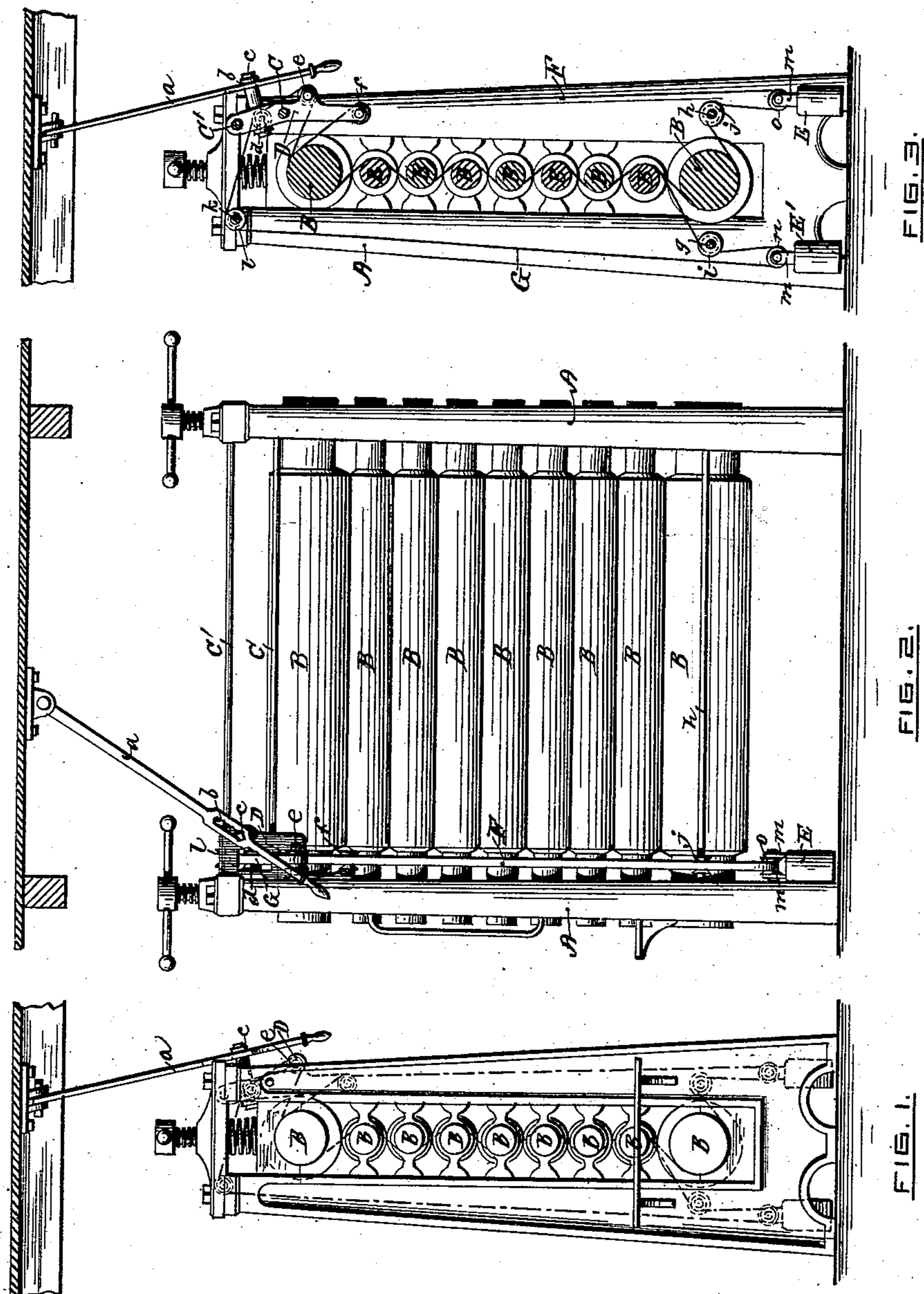
2 Sheets—Sheet 1.

M. H. CRAM.

ENTERING GUIDE FOR CALENDERING ROLLS.

No. 333,283.

Patented Dec. 29, 1885.



WITNESSES:

Chas. F. Schuch.

Joseph J. Scholfield.

INVENTOR:

Madison H. Gram

per. S. Scholfield

Attorney

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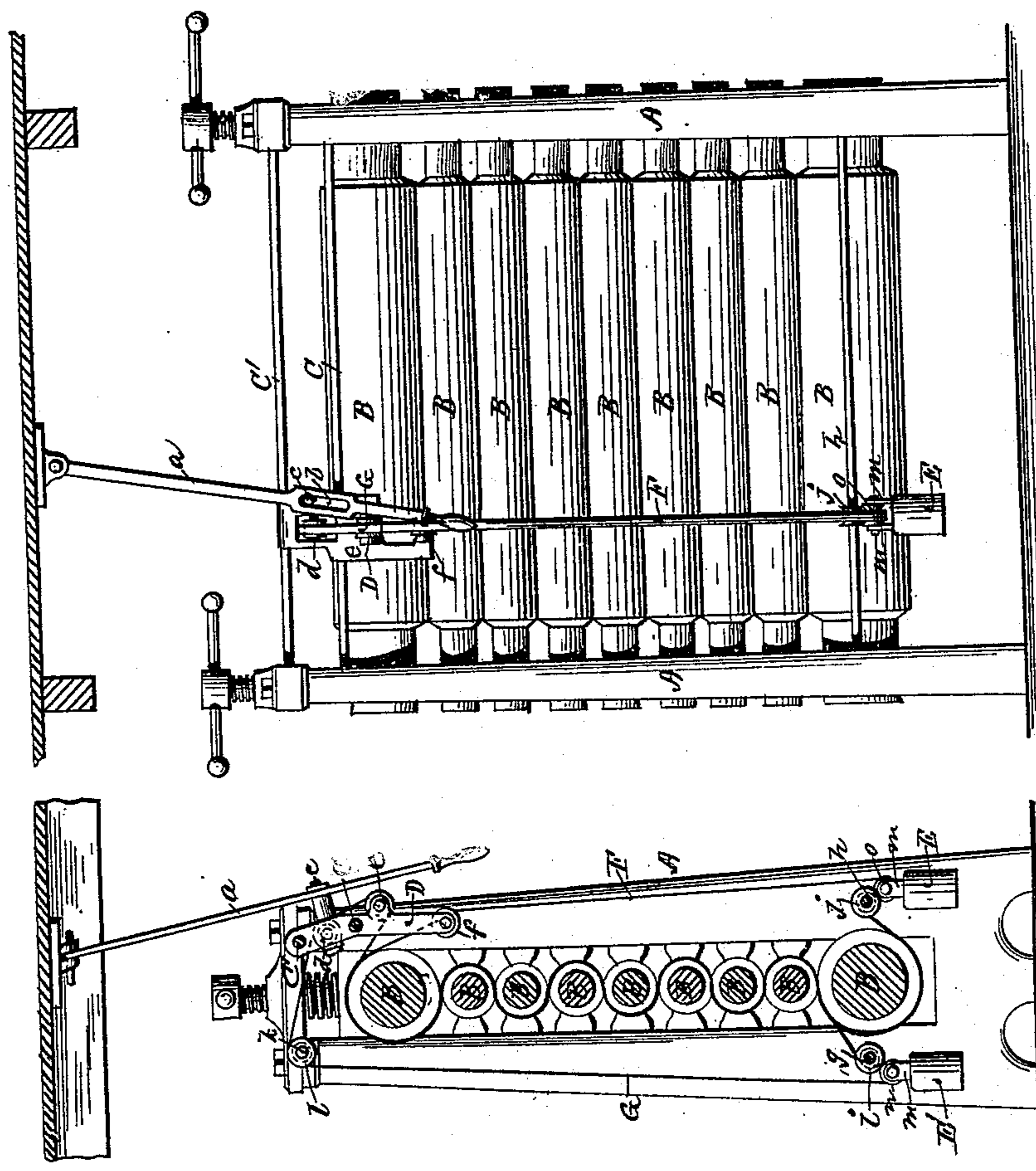


FIG. 6.

FIG. 5.

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Chas. F. Schuch
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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 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; and also upon a rod, *k*, which extends from one of the bearing-standards to the other at the same height and parallel with the guide-rod C', placed the loose pulley *l*. The weight E is provided with the upright ears *m m*, between which is pivoted the loose pulley *o*, and to the opposite weight, E', is in like manner provided with the loose pulley *n*. The narrow endless guide-belt F, when in its normal position, as shown in Fig. 3, passes from the carriage-pulley *f* over the smaller end portion of the top roll B, thence downward from side to side between the smaller end portions of the rolls and under the bottom roll B, thence over the loose pulley *j* upon the rod *h*, thence under the loose pulley *o* of the weight E, and upward to the pulley *f*. The narrow endless belt G, which runs over the rolls B in contact with the belt F, passes from the roll *e* of the carriage D over the smaller portion of the top roll B in contact with and above the belt F, thence downward with the belt F from side to side between the rolls B and outward over the loose pulley *i* upon the rod *g*, thence under the pulley *n* of the weight E' and upward to the loose pulley *l* upon the rod *k*, and thence over the loose carriage-pulley *d* to the pulley *e*, the belts F and G moving uniformly in the same direction between the rolls B B.

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

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

I claim as my invention—

1. The combination of a set of calender-rolls with the endless belts running from or

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 is described.

MADISON H. CRAM.

Witnesses:

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CHAS. F. SCHMELZ.