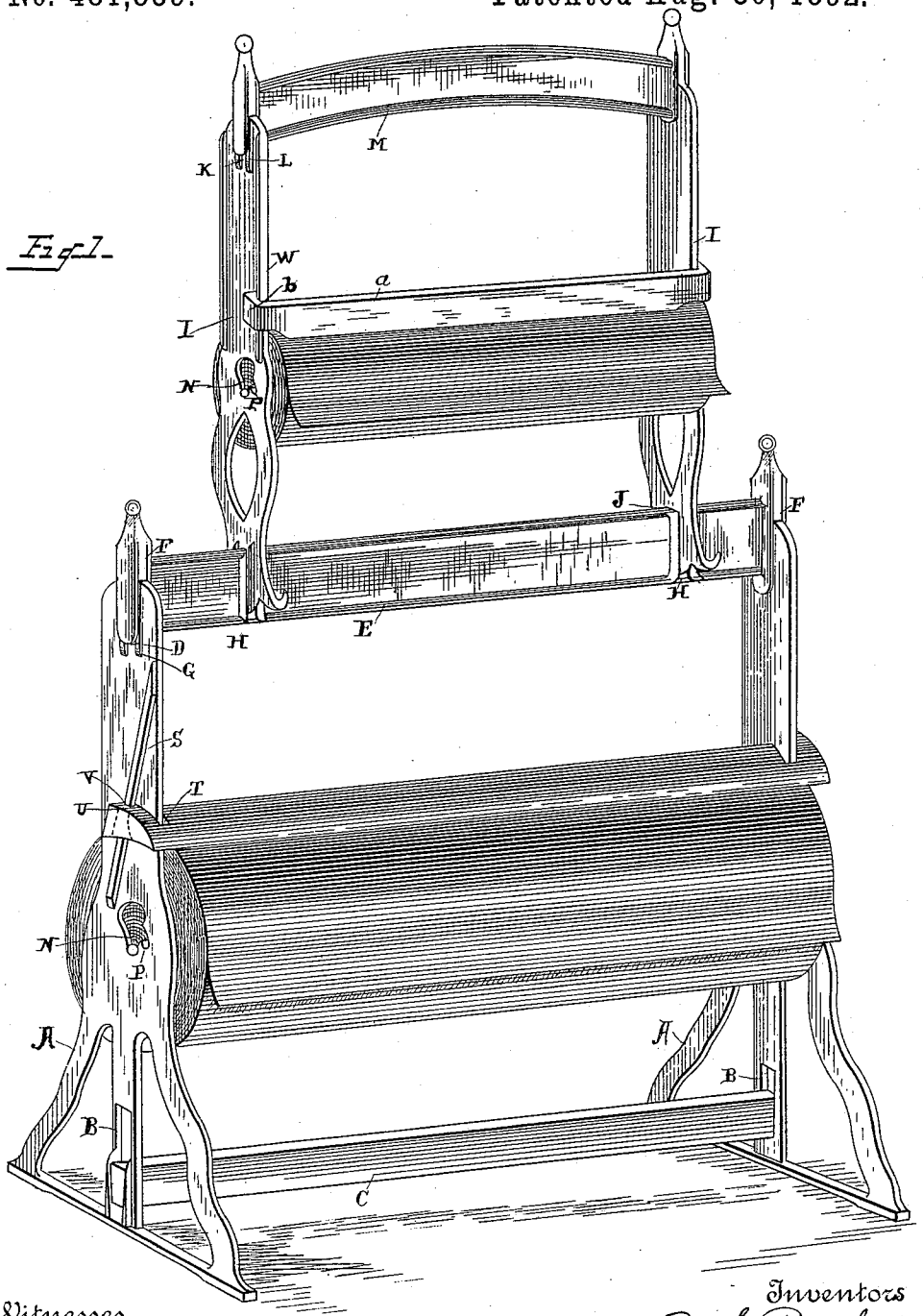
(Model.) 2 Sheets—Sheet 1.

A. S. BEACH & A. BOOTH.

KNOCKDOWN PAPER ROLL HOLDER AND CUTTER.

No. 481,839. Patented Aug. 30, 1892.

Fig. 1.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(Model.) 2 Sheets—Sheet 2.

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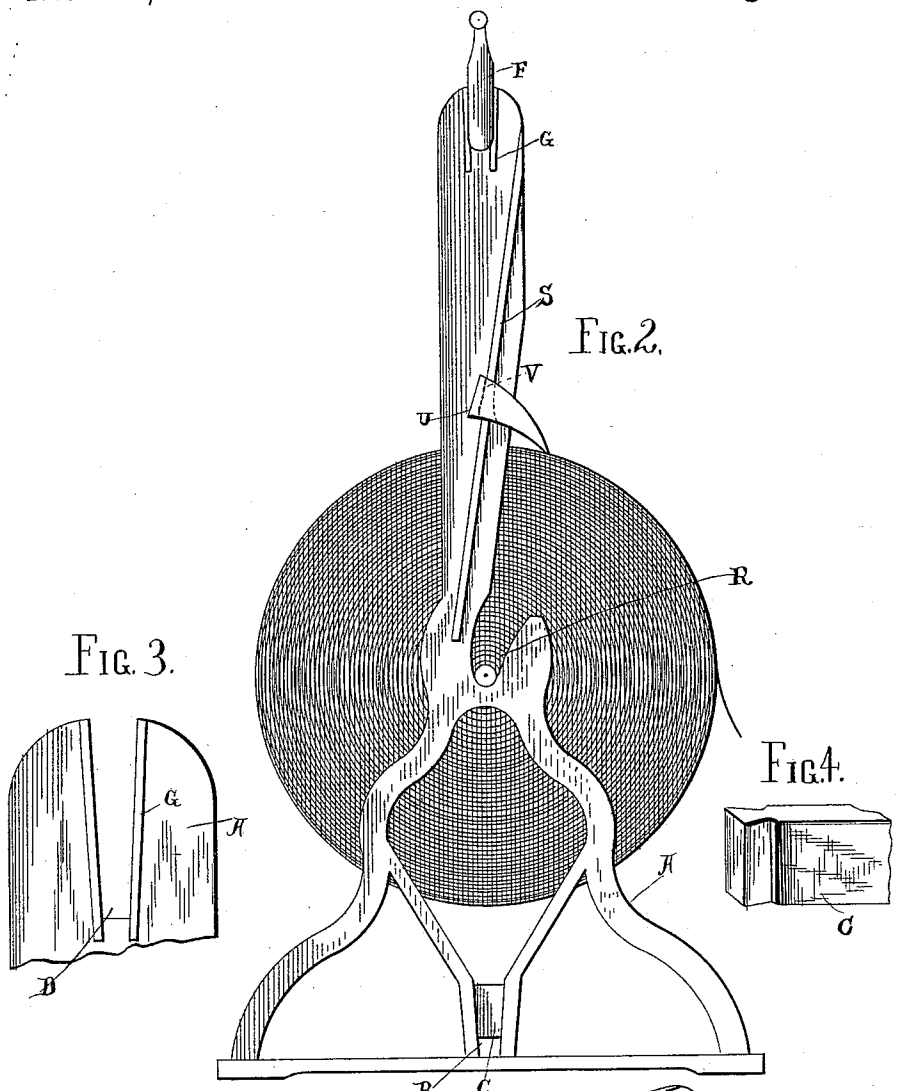

FIG. 2.

FIG. 3.

FIG. 4.

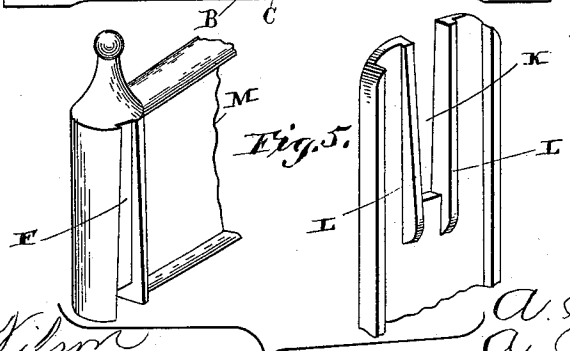

Fig. 5.

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UNITED STATES PATENT OFFICE.

AEAD. S. BEACH AND ALVIN BOOTH, OF GROTON, NEW YORK.

KNOCKDOWN PAPER-ROLL HOLDER AND CUTTER.

SPECIFICATION forming part of Letters Patent No. 481,839, dated August 30, 1892.

Application filed April 5, 1892. Serial No. 427,904. (Model.)

To all whom it may concern:

Be it known that we, AEAD. S. BEACH and ALVIN BOOTH, of Groton, in the county of Tompkins and State of New York, have invented certain new and useful Improvements in Knockdown Paper-Roll Holders and Cutters; and we 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

Our invention relates to improvements in knockdown paper-roll holders and cutters; and it consists in certain novel features of construction and in the arrangement and combination of parts, which will be fully described hereinafter, and particularly referred to in the claims.

The object of our invention is to provide a knockdown paper-roll holder and cutter in which the parts are constructed to be held together securely and firmly by means of cross-pieces that have wedge-shaped or dovetailed ends that fit in grooves or slots formed in the several parts of the device, whereby the device can be quickly and readily taken down for shipment in a small package and quickly and readily set up by connecting the parts.

In the accompanying drawings, Figure 1 is a perspective view of a knockdown cutter and paper-roll holder, showing it set up and formed to support two reels of paper and cutters therefor. Fig. 2 is a front elevation showing it supporting one reel. Fig. 3 is a detached view of the upper end of one of the base side standards. Fig. 4 is a detail view of one end of the lower cross-bar C. Fig. 5 is a detail view of the upper end of one of the side standards and the adjoining end of the upper cross-bar.

A indicates the base side standards, which are wide at their lower ends to form a firm foundation for the device when it is set up for use. The wide lower ends of these standards are cut out to present any desired configuration, as illustrated, for the purpose of ornamentation, and also to both lighten the device and to save metal. Formed in the lower ends of these side standards are the vertical wedge-shaped slots B, which receive the ends of the lower cross piece or tie C. This cross-piece C has its ends made wedge-shaped, so that it will fit tightly and firmly the slots when forced down, and also dovetailed, as illustrated, so that they prevent the lower ends of the said standards from becoming separated. These slots B are longer than the said piece C is tall, so that it can be moved up within the slots sufficiently to allow it to be loosened and removed therefrom when it is desired to take the device apart. Formed in the upper ends of these standards are vertical slots D, which are likewise made wedge-shaped, and the upper cross-piece E is provided in its sides near its ends with the vertical wedge-shaped grooves F, which receive the edges or walls of the said slots. This top cross piece or bar is placed in the slots at the upper ends of the said side standards, with the said side grooves thereof in the slots. At the outer edges of the slots D are the beads or ribs G, which are made wedge-shaped, so that the ends of the said top cross-pieces are firmly wedged in place and the upper ends of the side standards held against any movement whatever, while at the same time they can be readily removed from the slots D when it is desired to take the device apart.

As shown in Fig. 1, the top piece E is provided with additional side grooves H, which are also made wedge-shaped and receive the lower ends of the top side standards I, which are provided with slots J for that purpose. These slots J are likewise provided with beads at their outer edges, which are made wedge-shaped, so that the lower ends of these upper side standards can be wedged firmly in place. The upper ends of the upper side standards are provided with slots K and beads L to receive a top cross-piece M, which is similar to the top cross-piece of the lower side standards. In this manner the device is provided with means for supporting two reels or rolls of paper, one above the other, and of different sizes, as will be understood, thus forming what we term a "pyramid." Instead of forming a pyramid, however, only a single knockdown holder can be constructed, as illustrated in Fig. 2.

Formed in the upper and lower side standards are the openings N, of a suitable shape

to receive the pivotal ends of the shaft or the paper-reel, and thus support it removably between the said standards. The pivotal points of the reel-shaft may either be placed in the lower ends of the openings, or in side pockets or slots P, formed in the wall of the said openings, as may be preferred.

Instead of forming openings N, as just described and as illustrated in Fig. 1, notches R may be formed in the edge of the standards, as shown in Fig. 2, for the reception of the pivotal points of the reel-shaft.

Formed at the outer sides of the lower standards are the diagonally-extending beads S for the purpose of guiding the cutter, as will now be described. The cutter for the lower reel is formed concave at its under side, having one edge formed as a cutting-edge and provided with slots T, which receive the edges of the side standards A. Just beyond these slots T are the thickened portions U, which are provided with vertical slots V to receive the guiding-ribs at the outer sides of the said standards. These slots V have widened lower ends, so that the knife or cutter will readily descend upon the ribs by its own gravity as the paper upon the reel is disposed of without having any tendency to bind. The purpose of making the beads extend diagonal and their lower ends brought nearer the center of the standards or to their opposite sides is to bring the cutting-edge of the cutter-bar nearer the center of the paper-roll as it is being diminished.

Formed upon the outer edges of the upper side standards are the vertical beads W, which guide the cutter-bar *a*. This cutter-bar *a* consists of a vertical bar having its lower edge sharpened and its ends bent to form hooks or cast with slots to form hooks *b*, which catch around the said beads. This cutter-bar drops of its own gravity as the paper-reel is reduced in size. By forming the beads upon opposite sides the cutter can be placed upon either side of the device, as convenience may dictate. Instead of using this cutter, however, the cutter shown below, consisting of the concaved cutting portion, may be substituted therefor, as will be readily understood.

From the above description it will be seen that we produce a paper-roll holder and cutter which can be quickly and readily taken apart and put together, which will be found very convenient for transportation.

Instead of forming the cutter-bar with slots for guiding it upon the standards the ends of the cutter-bar may be provided with projections which will move in grooves formed in the inner sides of the vertical standards.

As illustrated, the front edge of the cutter-bar rests upon the paper-roll, and when the paper is raised against the cutting-edge thereof the bar locks or wedges at its bearing-point, which prevents the bar from raising, thus making a smooth cut of the paper, as will be understood, which would not occur if the outer edge of the cutter-bar was allowed to rise.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. A knockdown paper-roll holder and cutter comprising side standards, a connecting-bar for their lower ends, a connecting-bar at their upper ends, upper side standards having vertical slots in their lower ends which fit over the said upper cross-bar, a bar connecting the upper ends of the said upper side standards, a paper-roll supported in both the upper and lower standards, and a cutter-bar for each, substantially as described.

2. A knockdown paper-roll holder and cutter comprising side standards having wedge-shaped slots in their upper and lower ends, a cross-bar for the lower ends having wedge-shaped ends to enter the lower slots, and an upper cross-bar having side grooves which receive the walls of the upper slots, substantially as shown.

3. A knockdown paper-roll holder and cutter comprising side standards, a cross-bar connecting the lower ends thereof, vertical slots in the upper ends of the said side bars, and wedge-shaped beads at the edges of the said vertical slots, a cross-bar for the upper ends of the side bars, having vertical grooves which receive the walls of the said vertical slots and also the wedge-shaped beads, substantially as specified.

4. A paper-roll cutter consisting of a bar being concaved at its under side, slots in each end thereof, the outer wall of the said slots being thickened and provided with vertical slots at their inner sides, combined with vertical standards having beads or ribs at their outer sides which enter the said vertical grooves, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

AEAD. S. BEACH.
ALVIN BOOTH.

Witnesses:
B. L. BUCK,
B. D. NOBLES.