

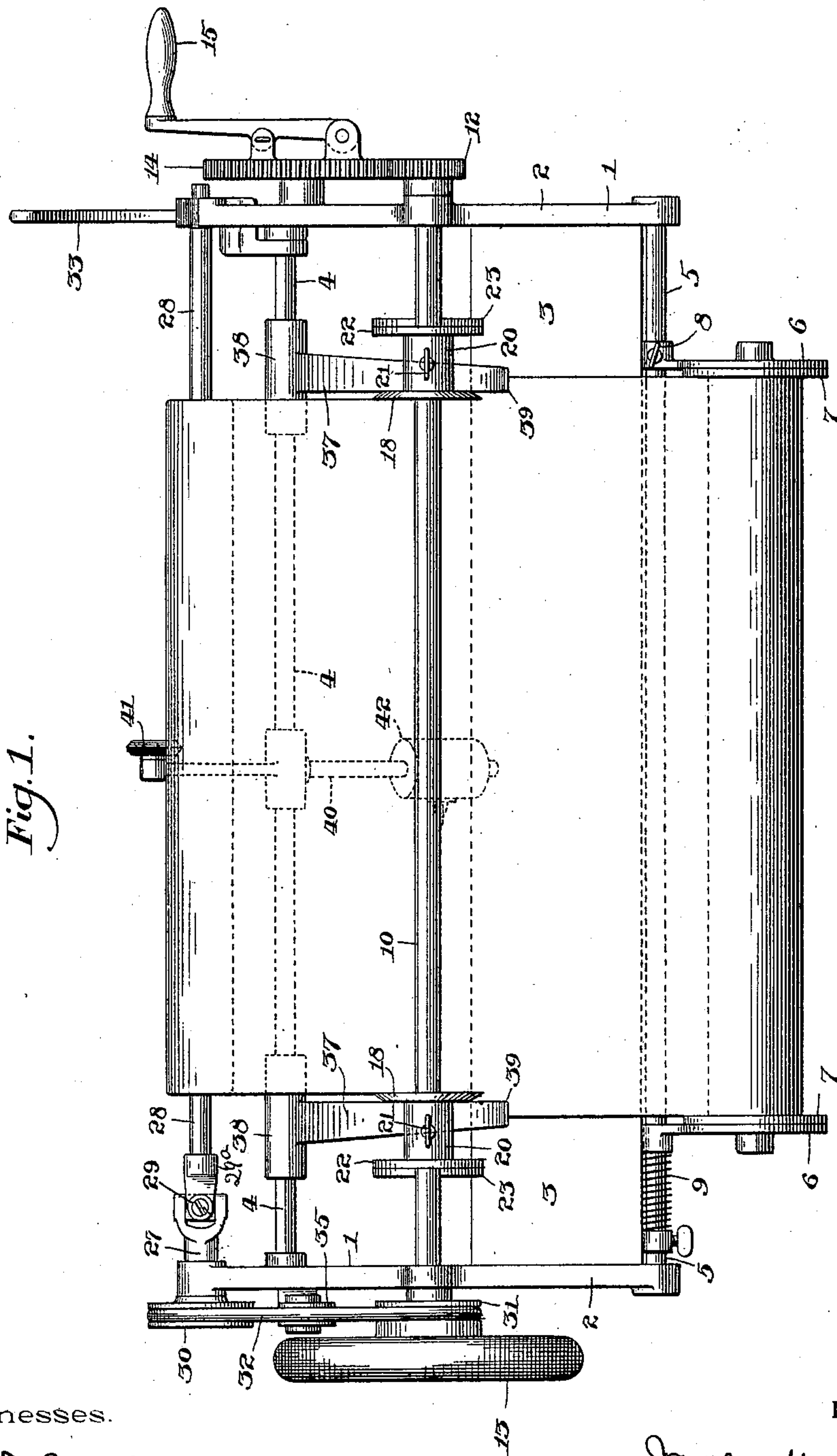
(No Model.)

2 Sheets—Sheet 1.

J. M. BRADY.
MACHINE FOR TRIMMING WALL PAPER.

No. 602,253.

Patented Apr. 12, 1898.



Witnesses.

A. V. Grouper
John F. Basford

Inventor.

James M. Brady,
per John R. Nolan
Attorney.

(No Model.)

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Fig. 2.

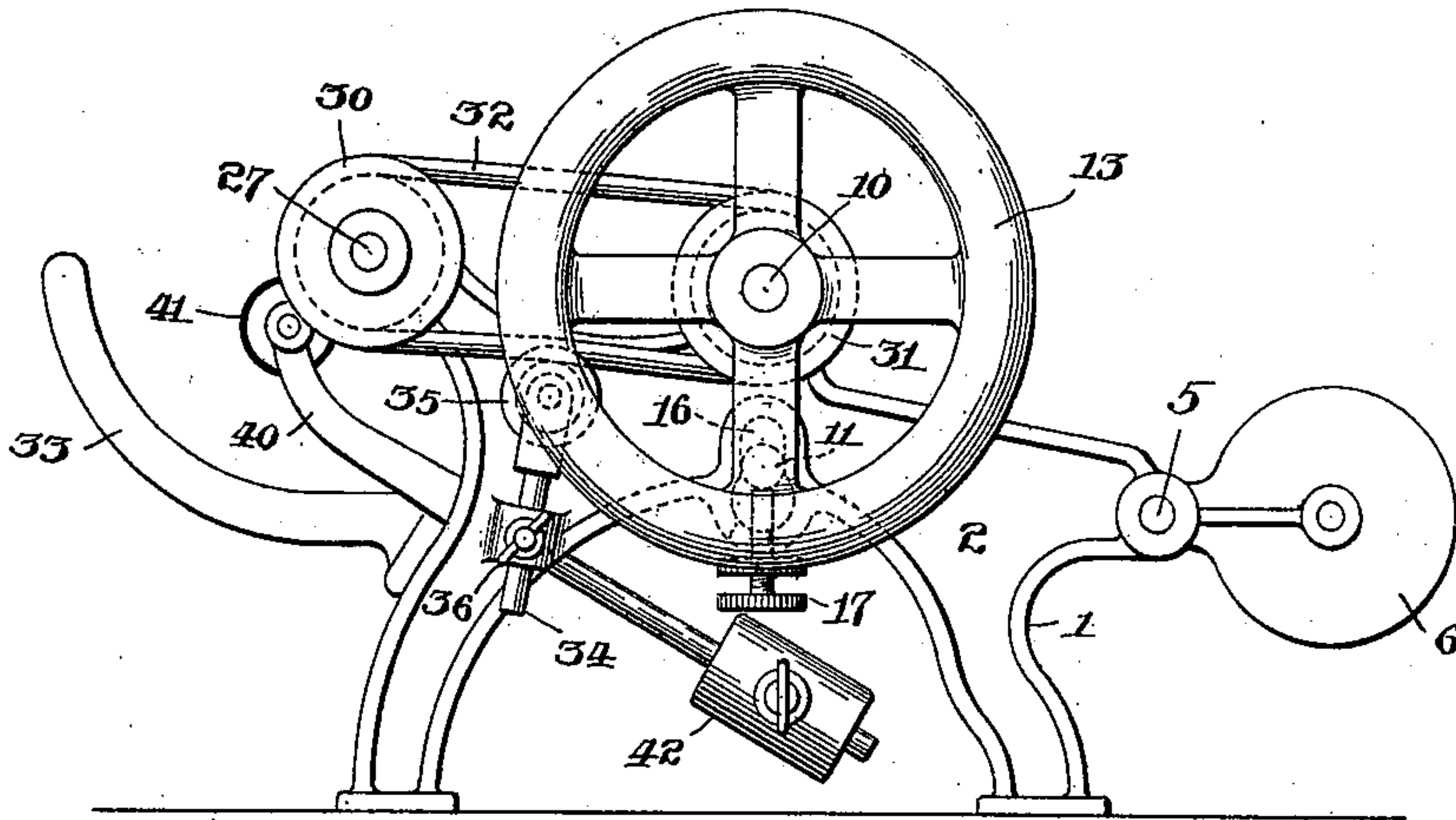


Fig. 3.

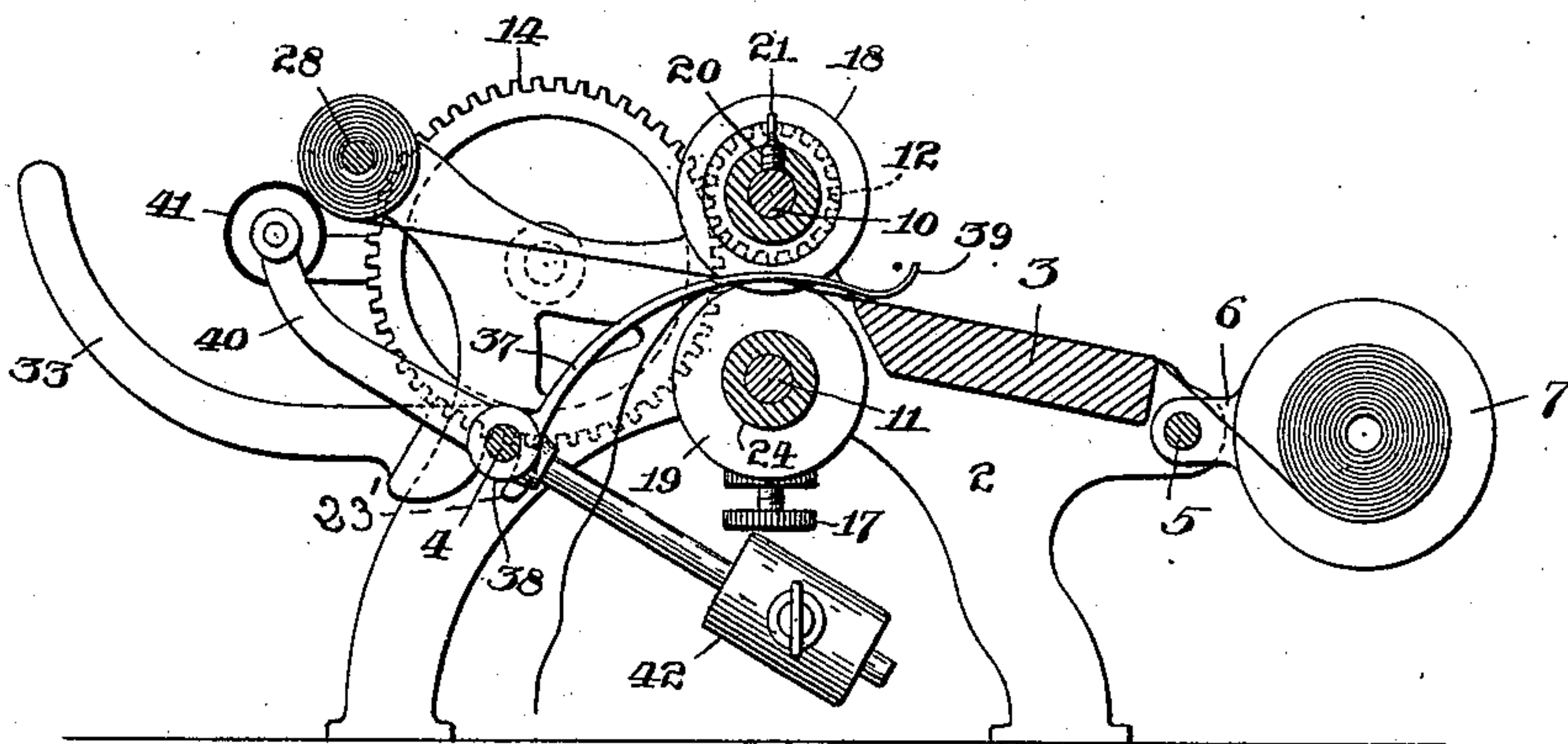
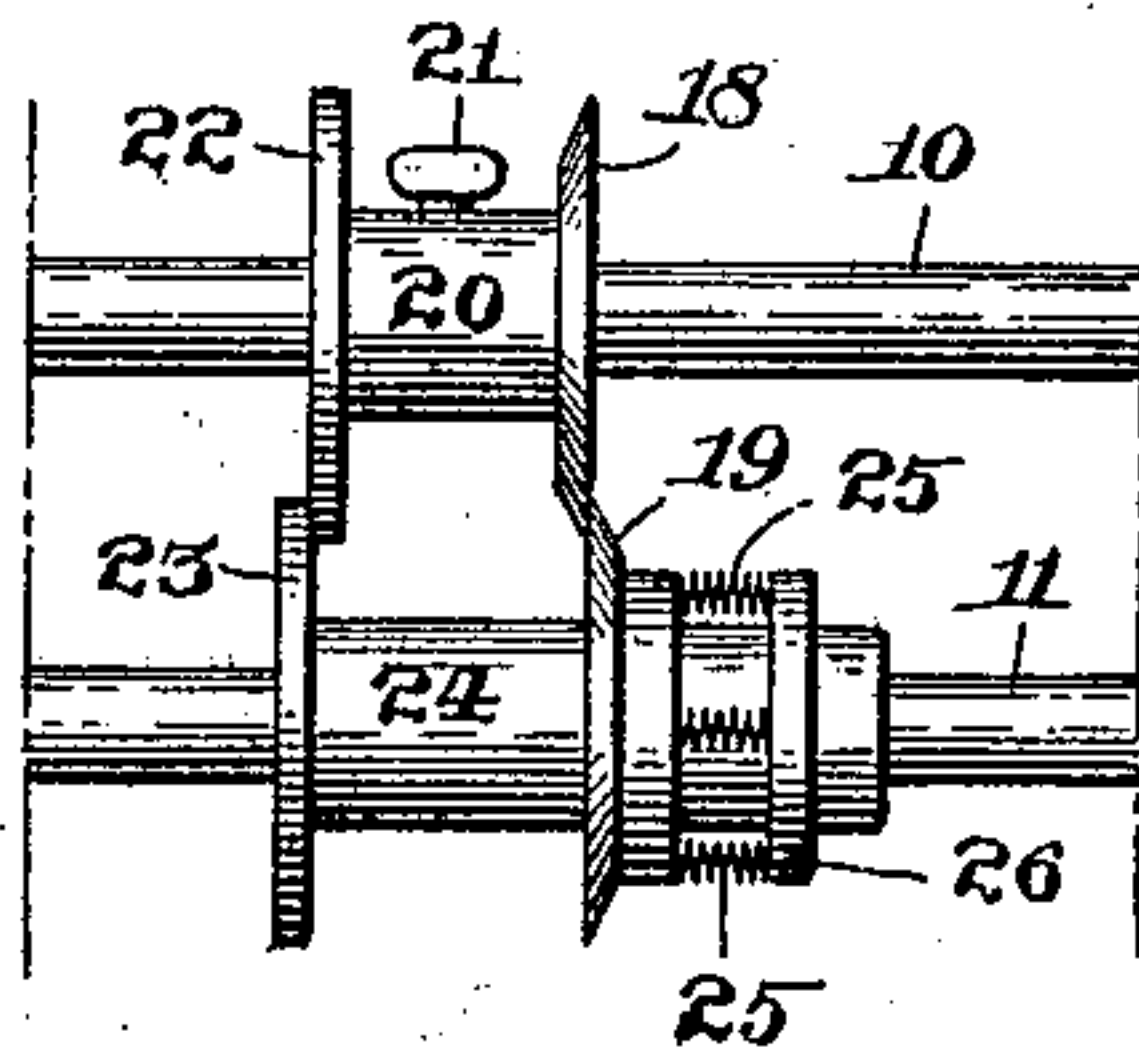


Fig. 4.



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UNITED STATES PATENT OFFICE.

JAMES M. BRADY, OF PHILADELPHIA, PENNSYLVANIA.

MACHINE FOR TRIMMING WALL-PAPER.

SPECIFICATION forming part of Letters Patent No. 602,253, dated April 12, 1898.

Application filed December 12, 1896. Serial No. 615,429. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. BRADY, a citizen of the United States, residing in the city and county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Machines for Trimming Wall-Paper, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to mechanism for trimming and rolling wall-paper, &c., and, as generally stated, relates to a machine of this character wherein the coacting cutters may be adjusted longitudinally of the machine to meet the requirements of varying widths of paper, a novel means for guiding the trimmings clear of the take-up shaft, and a simple and efficient means for insuring a uniform winding of the trimmed paper on the take-up shaft, together with other novel and advantageous features, which will be hereinafter particularly described and claimed.

In the drawings, Figure 1 is a plan of a machine embodying my improvements. Fig. 2 is an elevation of the left-hand end of the machine. Fig. 3 is a transverse vertical section through the machine. Fig. 4 is a view of a pair of cutters.

The numeral 1 designates the supporting-frame, comprising the end heads 2, the platform 3, and the tie-rod 4.

Supported in the end heads, forwardly of the platform, is a rod 5, on which are adjustably mounted two brackets 6, provided on their inner faces with rotatable disks 7, bearing central pins for the reception and support of the respective ends of the roll of paper to be trimmed. One of the brackets is held in place by a set-screw 8, taking against the shaft, while the other is pressed yieldingly inward by the action of a suitably-disposed spiral spring 9, encircling the adjacent end of the shaft, whereby the latter bracket and its disk may be readily moved to permit the application of the roll to and between the disks or to permit its ready removal therefrom, as desired.

Supported in suitable bearings in the end heads, rearwardly of the platform and above and below the same, respectively, are two parallel shafts 10 11, the upper one of which is

provided on its extremities with a pinion 12 and a balance-wheel 13, respectively. The pinion coacts with a spur-wheel 14, mounted on the side of the adjacent end head, whereby when the latter wheel is rotated through the medium of a suitable crank-handle 15 thereon the shaft 10 is rapidly revolved. The bearings for the lower shaft comprise vertical slots 16 in the end heads, together with vertical adjusting-screws 17, working in the slots, whereby the lower shaft may be adjusted in respect to the upper shaft, as occasion may require.

On the shafts 10 and 11 the respective coacting parts of two rotary cutters are mounted, the same being so constructed and arranged that they may be adjusted on the shafts to trim simultaneously the two marginal edges of a predetermined width of paper drawn from the roll on the supporting-disks. Each of the cutters in its preferred though not essential form comprises two coacting beveled disks 18 19, mounted on the upper and lower shafts, respectively. The upper disk 18 is formed on or secured to one end of a sleeve 20, which is applied to the shaft and is provided with a set-screw 21, whereby it may be secured in any predetermined position of longitudinal adjustment on the shaft. The opposite end of the sleeve is provided with a flange 22, which overlaps the inner peripheral edge of a corresponding flange 23 on a sleeve 24 on the lower shaft. On the latter sleeve is loosely fitted the lower cutting-disk 19, the same being held yieldingly in contact with the outer peripheral edge of the upper disk by means of spiral springs 25, which are interposed between the boss of the disk 19 and a collar or flange 26 on the sleeve 24. By this construction it will be seen that if the screw 21 be loosened and the upper member of the cutter be adjusted on the shaft the lower member thereof will be simultaneously adjusted, whereupon if the screw be tightened the respective members of the cutter will be secured in place. Thus there may be effected rapid and accurate adjustment of the respective cutters on their shafts to provide for the trimming of papers of varying widths when the shaft 10 is rotated, as above described. It will also be seen that by vertically adjusting the lower shaft the position of the cutting

members thereon may be nicely set in respect to the coacting upper members to compensate for wear, &c.

In the end heads, at the rear of the machine, is mounted a longitudinal take-up shaft upon which the paper is rolled as rapidly as it is trimmed by the cutters. This shaft comprises two sections 27 28, which are connected adjacent to one of the end heads by a universal joint 29. The socket-piece 29^a of this joint is rigidly secured to or integral with the shaft-section 28. The shorter section 27 is extended through a bearing in the adjacent or left-hand end head and is provided with a fixed pulley 30, which is connected with and driven from a corresponding pulley 31 on the driving-shaft 10 by means of a band 32, while the free end of the other or main section 28 rests in a socket in the other or right-hand end head. Hence if at the outset the free end of the trimmed portion of the paper be wound on the shaft-section 28 the latter during the continued operation of the machine will automatically wind up the paper as rapidly as it is trimmed. Upon the completion of the operation the right-hand end of the shaft-section 28 is lifted and removed from its bearing, (the universal joint at 29 permitting free lateral and vertical movement of said section from the said joint as a center,) and the roll of trimmed paper can then be readily slipped therefrom.

To obviate any liability of the roll slipping from its shaft upon the floor should the operator accidentally drop the free end of the shaft, I provide on the adjacent end head, slightly below the shaft, a rearwardly-extending curved arm 33, which under the circumstances mentioned will intercept and catch the end of the shaft. The inner end of the arm is recessed to engage the edge of the end head and is provided with a hook 23', which embraces the tie-rod and thereby holds the arm firmly yet detachably in place.

I preferably fit to a boss on the left end head an adjustable shank 34, carrying on its upper end a tightener-roller 35, that may be moved with more or less pressure against the band 32 to regulate the tension thereof. The boss is provided with a set-screw 36 to fix the shank in its positions of adjustment.

As a simple and efficient means whereby the trimmings or strips severed from the paper shall be directed below the take-up shaft and be thereby prevented from engaging and winding upon the latter I provide adjacent to the respective cutters appropriate guides for the strips. These guides each comprise a curved plate 37, provided at its lower end with a sleeve or boss 38, which is loosely mounted on the tie-rod. These plates extend upwardly and forwardly through between the lower portions of the cutters 18 and the flanges 22, with their inner edges adjacent to the outer faces of the cutters. Each of said plates is formed at its upper end with an upcurved lip 39, that lies over the inner edge of the platform. The

strips as they are severed from the paper take against the undersides of the respective guide-plates and are directed rearwardly and downwardly thereby. Obviously these plates may be readily slid along the tie-rod in respect to the adjustments of the cutters. In order to insure the uniform winding of the paper on the take-up shaft, I fulcrum on the tie-rod a lever 40, on one arm of which is mounted a roller 41, that is held yieldingly against the paper at a point adjacent to the take-up shaft by means of an adjustable weight 42 on the other arm of the lever. The periphery of this roller is V-shaped in cross-section, as shown, so as to run in a line upon the middle of the paper and thereby exert just enough friction thereon to prevent endwise displacement of the paper as it is wound. Said roller may or may not have a covering of leather, rubber, or like material. It will be seen that the arrangement of these strip-guides is such that the free end portions thereof take a bearing upon the edge portions of the paper before it passes to the cutters. (See Fig. 3.) The trimming is thereby guided and held steady while it is being cut, and as soon as cut is naturally guided downwardly by the said guides, it not being necessary to direct the strip with the hand at the commencement. Furthermore, there is no chance for the trimmings to catch and choke as they follow said guides.

I claim as my invention—

1. In a machine for trimming wall-paper, &c., the combination with the supporting-frame, of parallel cutter-bearing shafts, a longitudinally-adjustable rotary cutter on one of said shafts, a similarly-adjustable co-acting cutter on the other shaft, a spring to maintain said cutters in contact, and means whereby an adjustment of one of said cutters upon and throughout its shaft in either direction, causes a corresponding adjustment of the other cutter without affecting the pressure or tension of the spring, substantially as specified.

2. In a machine for trimming wall-paper, &c., the combination with the supporting-frame, of the parallel cutter-bearing shafts and the coacting rotary cutting devices carried by the said shafts and consisting each of a sleeve mounted to move longitudinally upon its shaft and having at one end a cutter-disk and at the opposite end a flange, the disk and flange of one of the devices lying between and engaging respectively the disk and flange of the other device, together with means whereby one of said devices may be secured against movement on its shaft, substantially as specified.

3. In a machine for trimming wall-paper, &c., the combination with the parallel cutter-bearing shafts, of the sleeve 20 adjustably secured upon one of the said shafts and having at one end a cutting-disk and at the opposite end a flange, the sleeve 24 movably mounted upon the other shaft and having at

one end a flange which engages the outer face of the flange of the sleeve 20, and having also a cutter-disk 19 loosely mounted thereon, and springs for holding said disk in yielding contact with the disk of the sleeve 20, substantially as specified.

4. In a machine for trimming wall-paper, &c., the combination of the frame, the parallel cutter-bearing shafts, their coacting cutting devices, the take-up shaft, mechanism for actuating said shafts, and strip-guides supported at points in rear of and below the cutting devices, and extending upwardly and forwardly to or adjacent to the outer faces of the cutters, in planes above the meeting edges of the cutters and to points in front of them and above the platform or feed-board, whereby the under sides of said guides lie in position to intercept the trimmings and bend and direct the same downward in rear of the cutting devices, substantially as specified.

5. In a machine for trimming wall-paper, &c., the combination of the frame, the parallel cutter-bearing shafts, their coacting adjustable cutting devices, the jointed take-up shaft, means for insuring a uniform winding of the trimmed paper upon said shaft, and the longitudinally-adjustable strip-guides mounted upon the frame at points to the rear of and below the cutter-bearing shafts and extending from thence upwardly and forwardly between the cutting devices and terminating in upwardly-turned end portions, substantially as specified.

6. In a machine for trimming wall-paper, &c., the combination with the frame, of parallel cutter-bearing shafts, their coacting adjustable cutting devices, the take-up shaft, and means for operating the said shafts, a bar or tie-rod arranged between and below the said shafts, longitudinally-adjustable strip-guides on said bar or rod and extending upwardly and forwardly therefrom to or adjacent to the outer faces of the cutting devices in planes above the meeting edges of the cutters and to points in front of said cutters and above the platform or feed-board, whereby the under sides of said guides lie in position to intercept the trimmings and bend and direct the same downward between the lower cutter-shaft and said bar or rod, substantially as specified.

7. In a machine for trimming wall-paper, &c., the combination with the supporting-frame, the parallel cutter-bearing shafts, their cutters, the take-up shaft and means for actuating said shafts, of a lever whereof one arm carries a weight and the other a roller having a V-shaped periphery, which bears against the paper, during the winding thereof, substantially as specified.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

JAMES M. BRADY.

Witnesses:

JESSE B. HELLER,
JOHN R. NOLAN.