

No. 731,140.

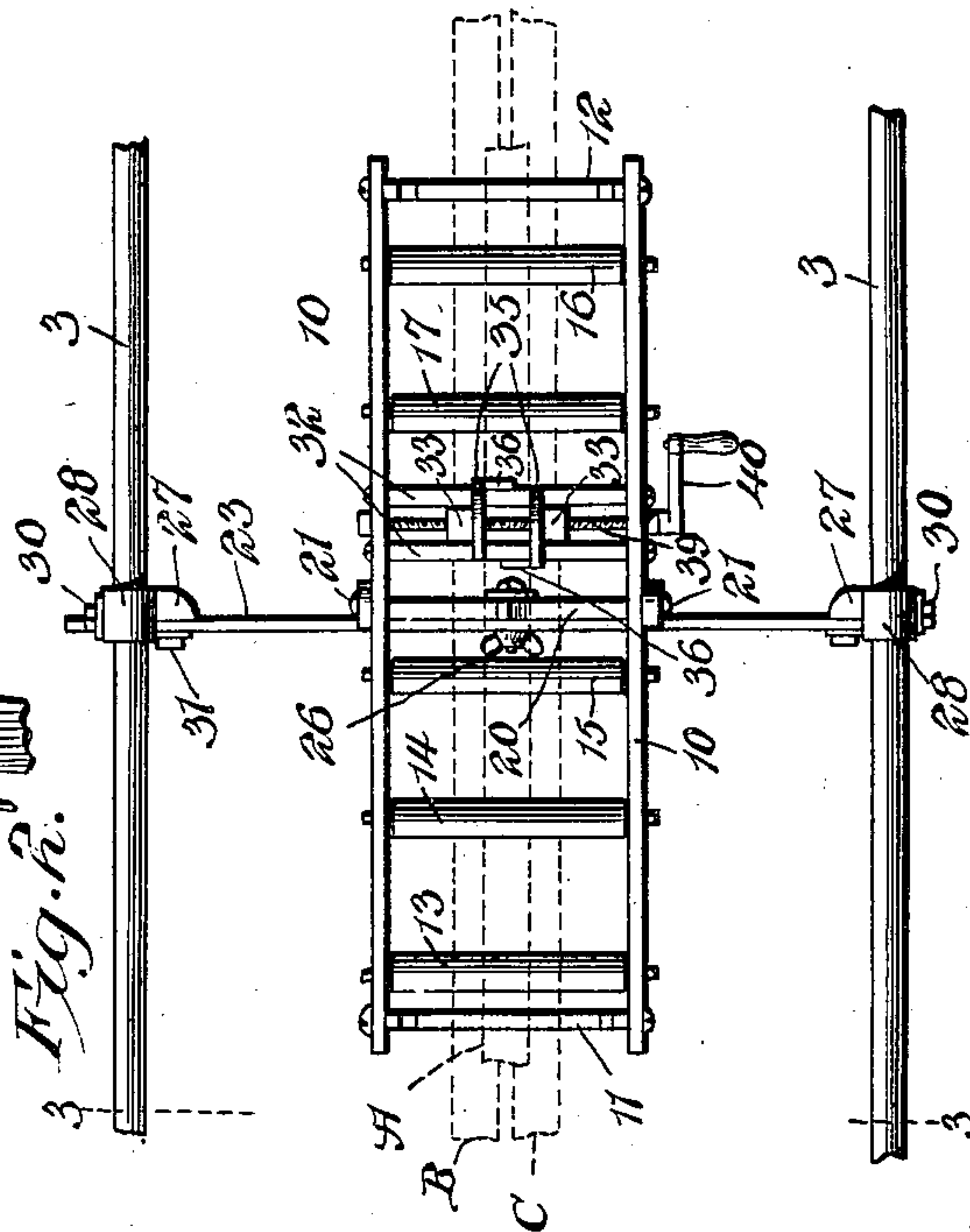
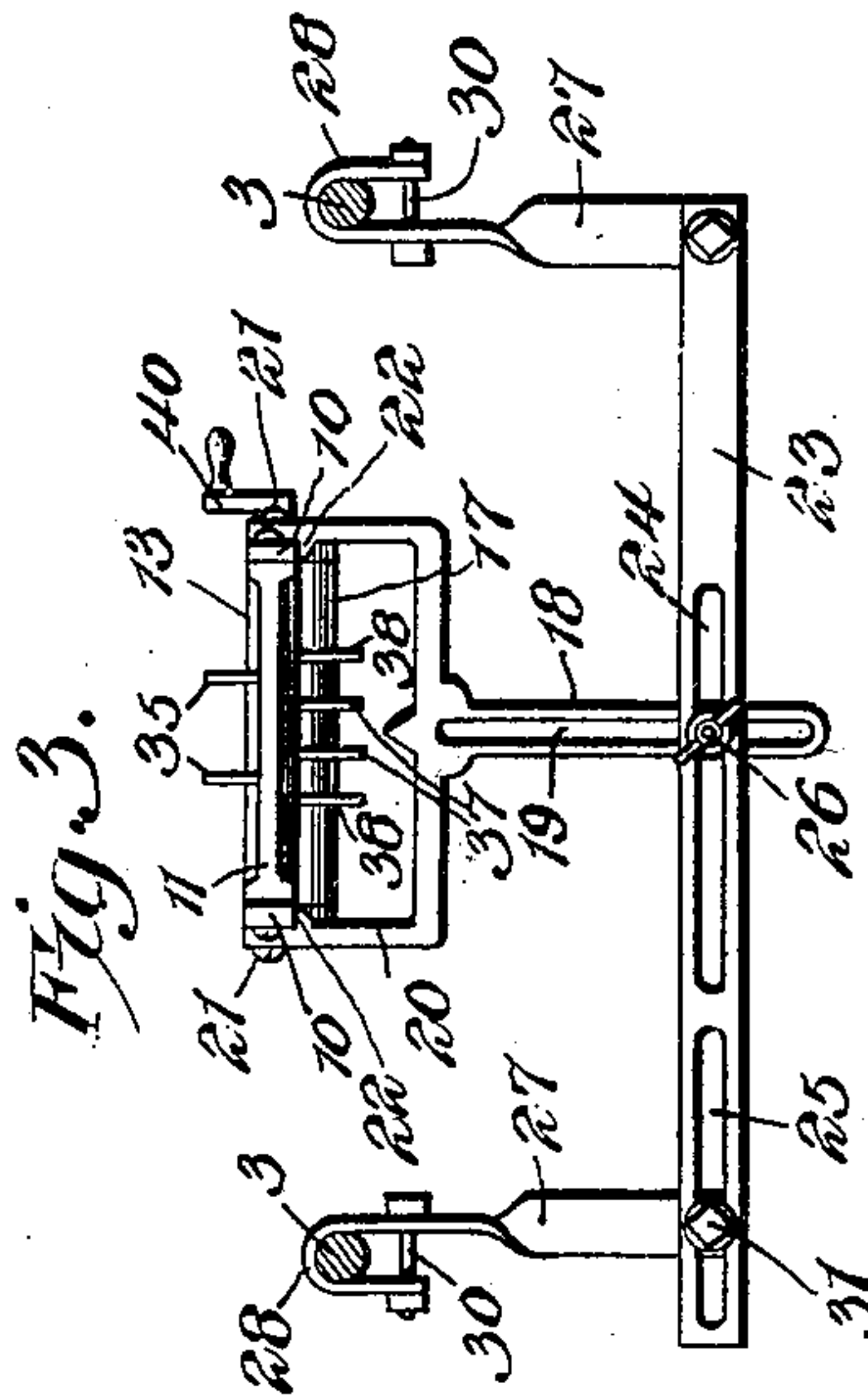
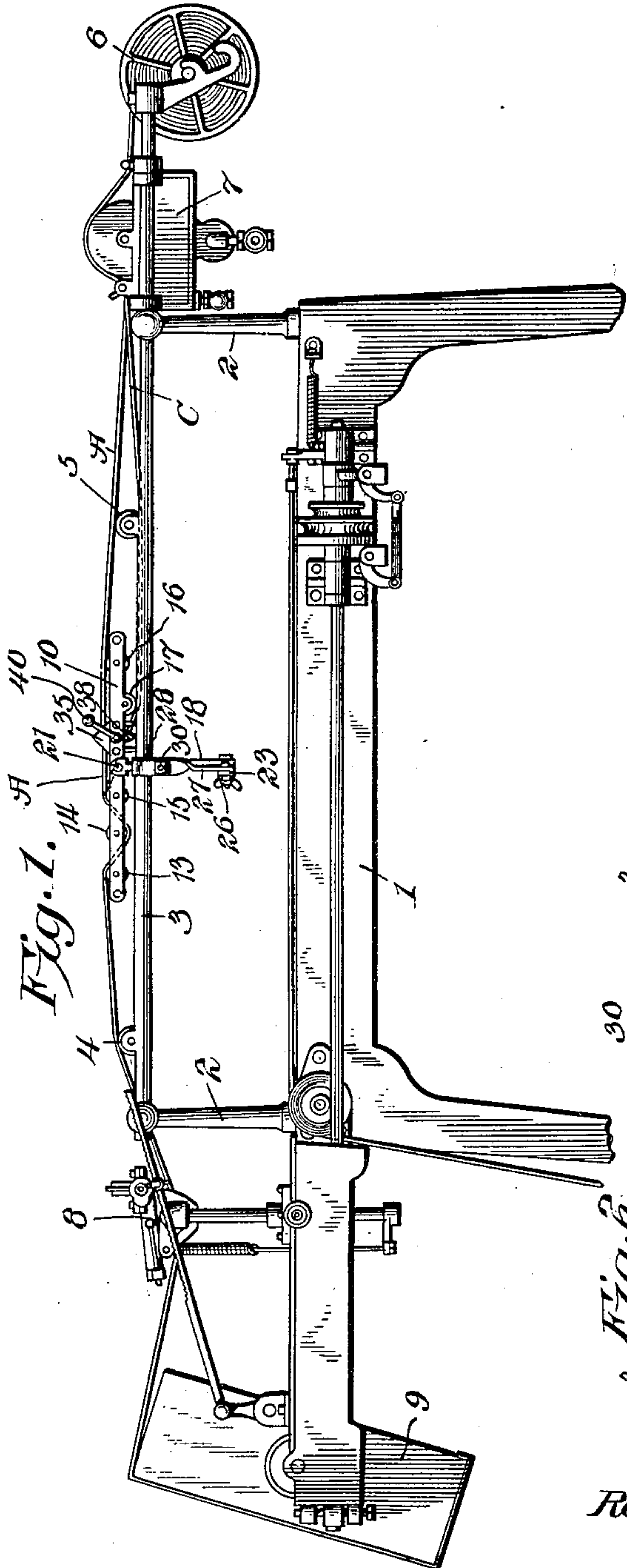
PATENTED JUNE 16, 1903.

R. A. THOMPSON.  
PAPER BOX COVERING MACHINE.

APPLICATION FILED AUG. 23, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Robert H. Thompson, Inventor.

By

*E. J. Siger*

Attorney

Witnesses  
*Howard W. Orr.*  
*H. J. Shepard.*

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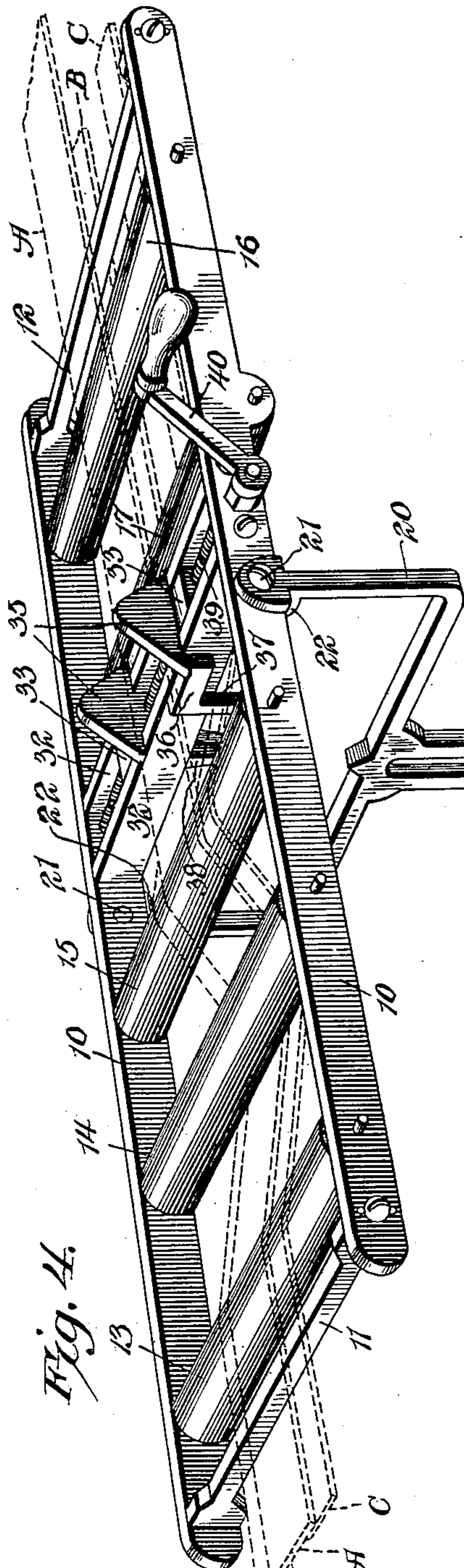


Fig. 4.

Witnesses  
Howard W. Art.  
J. Shepard.

Fig. 6.

Fig. 5.

Fig. 8.

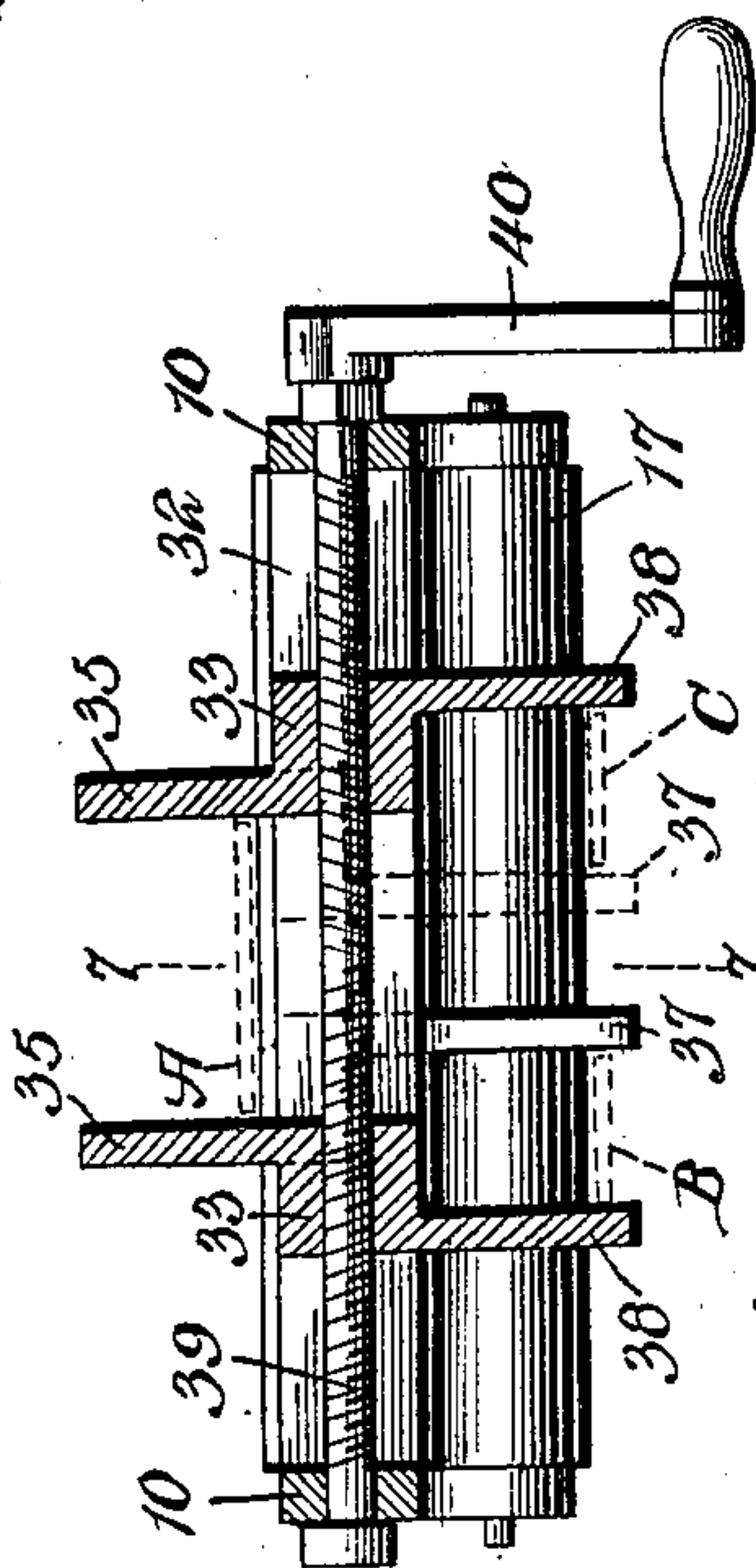
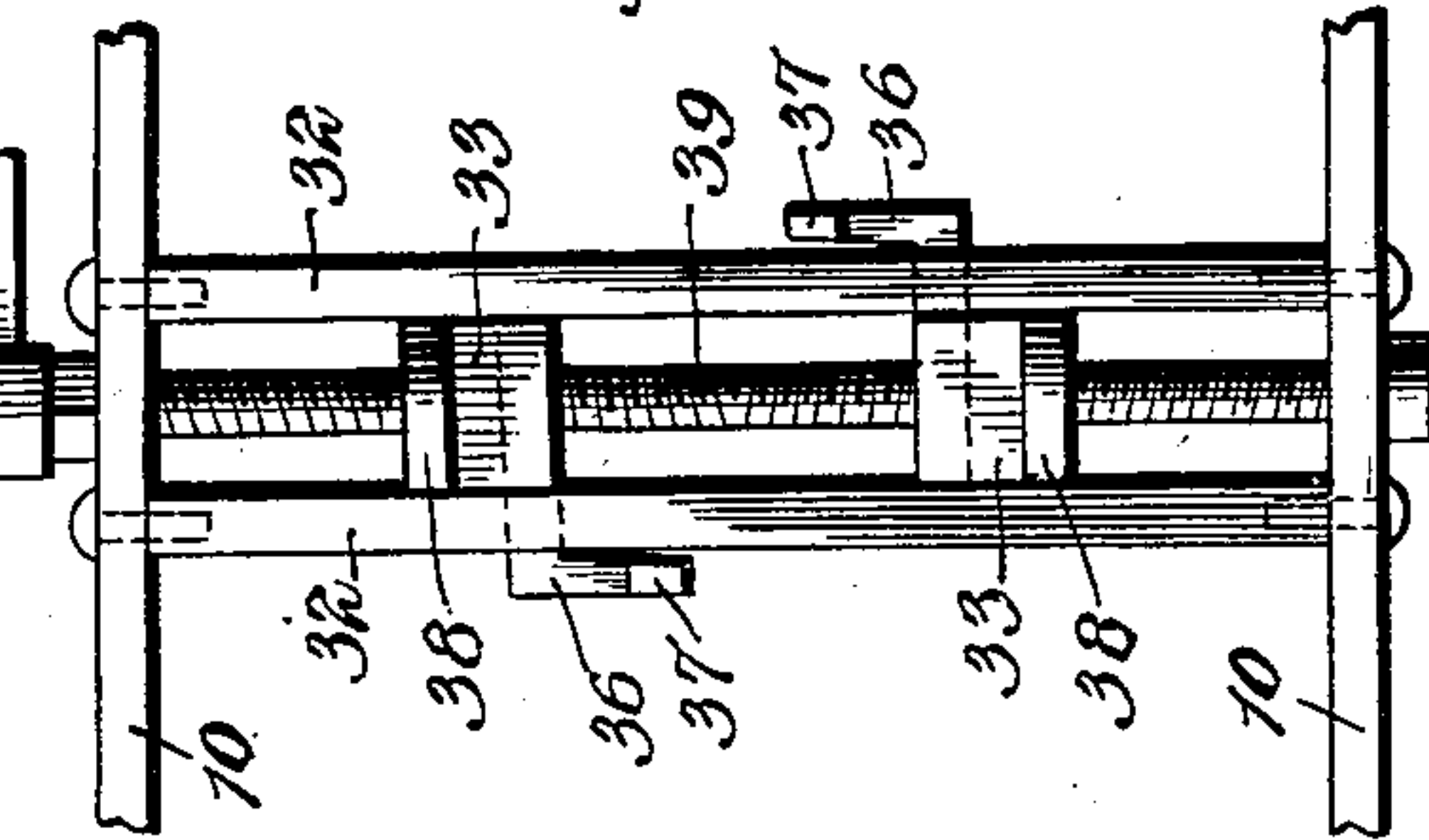
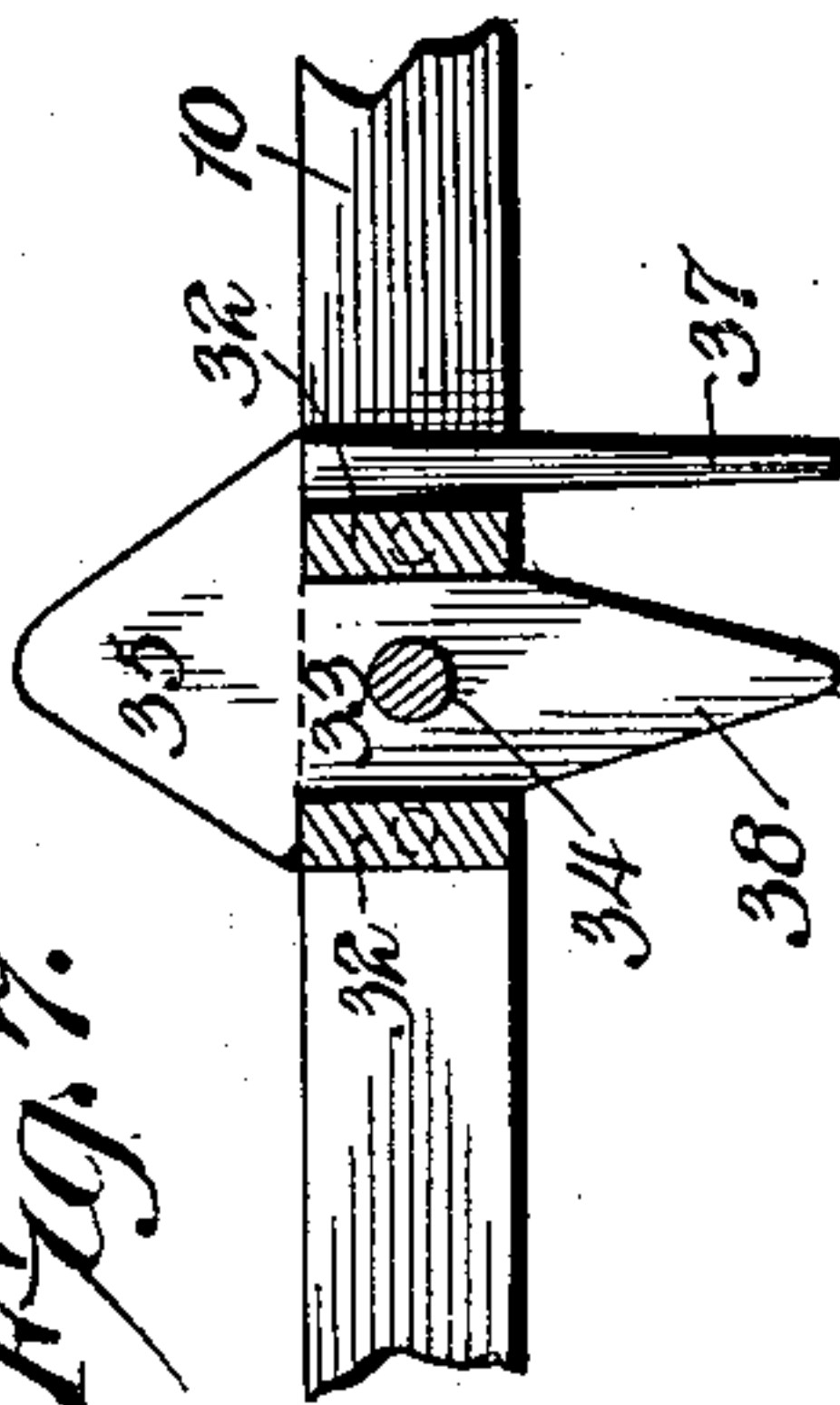


Fig. 7.



Robert H. Thompson, Inventor,

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# UNITED STATES PATENT OFFICE.

ROBERT ANDREW THOMPSON, OF MARTINSBURG, WEST VIRGINIA, AS-  
SIGNOR OF ONE-HALF TO RAYMOND M. DIXON, OF MARTINSBURG,  
WEST VIRGINIA.

## PAPER-BOX-COVERING MACHINE.

SPECIFICATION forming part of Letters Patent No. 731,140, dated June 16, 1903.

Application filed August 23, 1902. Serial No. 120,847. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT ANDREW THOMPSON, a citizen of the United States, residing at Martinsburg, in the county of Berkeley and State of West Virginia, have invented a new and useful Paper-Box-Covering Machine, of which the following is a specification.

This invention relates to paper-box-covering machines, and is designed to provide for guiding a plurality of strips of paper or other material for covering the sides of a box or lid, and in particular to guide a pair of ornamental edge strips so as to have the latter underlie the respective longitudinal edges of the main strip in order that the three strips may be applied simultaneously to the box or lid. It is furthermore designed to have the guide adjustable, so as to accommodate any width of main strip, and to have the guides for the ornamental edge strips simultaneously adjustable with the guides of the main strip in order that the edge strips may always bear the proper relation with respect to the main guide.

Another object of the invention is to embody the same in the form of an attachment which may be conveniently applied to the common or ordinary type of paper-box-covering machines without alternating or changing the latter in any manner whatsoever and without interfering with the operation thereof.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a side elevation of a common or ordinary type of box-covering machine having the present form of guide applied thereto. Fig. 2 is an enlarged detail plan view of a portion of the machine, showing the guide fitted thereto. Fig. 3 is a cross-sectional view on the line 3 3 of Fig. 2.

Fig. 4 is a detail perspective view of the guide-frame detached. Fig. 5 is a central transverse sectional view thereof. Fig. 6 is an inverted plan view of an intermediate portion of the guide-frame to show the relation of the guide members. Fig. 7 is a detail cross-sectional view on the line 7 7 of Fig. 5. Fig. 8 is a detail perspective view of one of the guides.

Like characters of reference designate corresponding parts in all of the figures of the drawings.

To adequately set forth the application and operation of the invention, there has been shown in the accompanying drawings the supporting-frame 1 of an ordinary paper-box-covering machine, having the opposite terminal posts or standards 2 rising therefrom for the support of the substantially horizontal and parallel longitudinal bars 3, which carry the opposite rollers 4 and 5 for supporting the strips as they pass through the machine. At the rear of the machine there are the usual reel 6 for the support of the paper-rolls and a glue-pot or paste-box 7. At the front of the machine are the strip-cutting apparatus 8 and a rotatable box-holder 9. It will be understood that these parts of the machine are common and well known and form no part of the present invention.

The device of the present invention, which is to be supported upon the longitudinal bars 3 substantially midway between the ends thereof, embodies a substantially rectangular frame made up of longitudinal side bars 10 and end bars 11 and 12, respectively. At the front of the frame are three transversely-disposed rollers 13, 14, and 15, which are journaled in the opposite sides of the frame and are disposed in the plane thereof. At the rear of the frame there is a transverse roller 16, disposed in the plane of the sides, and another roller 17, located in front of the roller 16 and hung below the frame. Immediately in rear of the roller 15 and below the frame is a standard 18, having a longitudinal slot 19 and provided at its upper end with a fork or yoke 20, the opposite end portions of which embrace the frame and are connected thereto by means of suitable fastenings 21, there be-



ing a boss or shoulder 22 upon the inner side of each member of the fork or yoke and disposed to lie against the under side of the frame, so as to rigidly support the latter upon the yoke.

For supporting the frame of the guide upon the longitudinal bars 3 of the machine there is a bracket consisting of a substantially horizontal bar 23, which is provided with an intermediate longitudinal slot 24 and a terminal longitudinal slot 25. The standard 18 is applied transversely across the slot 24 and is connected to the bracket by means of a bolt and thumb-nut 26, the bolt being projected through the intersecting parts of the slots 19 and 24, whereby the standard may be adjusted vertically and transversely. At one end of the bar 23 there is an upstanding hanger-arm 27, which is provided at its upper end with an inverted substantially U-shaped hook or seat 28, which is adapted to embrace the adjacent bar 3 of the machine, so as to support the bracket transversely beneath the bars 3. There is a bolt 30, which pierces the arm 27 and the extremity of the hook or seat, so as to lie beneath the rod 3 and prevent accidental upward displacement of the hanger-arm. At the opposite end of the bar 23 there is a duplicate hanger-arm 27, which is adjustable longitudinally of the bar by means of a bolt 31, piercing the lower end of the arm and working in the terminal slot 25, whereby the bracket may be accommodated to machines of different widths.

The means for guiding the paper strips is located between the rollers 15 and 17 and embodies a pair of spaced cross-bars 32, rigidly secured to the sides of the frame and forming ways for the opposite duplicate guide members 33. Each of these members consists of a rectangular body having a central screw-threaded opening 34. From the top of the body rises a substantially triangular ear or projection 35, which is flush with the inner end or face of the body and projects in front and rear thereof. From one end of the ear 35 there extends an integral lateral projection 36, which projects in front of the inner end of the body, and from the outer end of the projection 36 depends another projection 37, thereby forming an inverted substantially L-shaped guide projection at one end of the upstanding ear 35. At the outer end of the body is a pendent substantially triangular projection 38, which is flush with the end of the body and tapers downwardly. As best indicated in Fig. 7, it will be seen that the body of the guide has a working fit between the cross-bars 32, and the opposite projected ends of the upright ear 35 slide upon the upper edges of the cross-bars, so as to support the guide in position. Moreover, the pendent projection at the inner end of the guide is spaced at one side thereof, so as to lie at the outer side of the adjacent cross-bar. It will of course be understood that the two guide members are reversely arranged—that is to say,

the guide projection 37 of one member lies in front of the cross-bars 32, while the pendent projection of the other member lies in rear of the cross-bars. To simultaneously slide the guide members toward and away from each other, there is a screw-threaded shaft 39, which passes through the screw-threaded openings 34 of the guides and has its opposite ends journaled in the side members 10 of the frame. One end of the shaft is projected beyond the frame and provided with a suitable crank-handle 40. It will of course be understood that one half of the shaft is screw-threaded in one direction and the other half in the opposite direction, so that by turning the shaft the guide members will be simultaneously fed or adjusted toward and away from each other.

In explanation of the operation of the device it will be noted that the guide is supported upon the longitudinal bars 3 of the frame of the machine and disposed between the glue-pot and the rotatable box-holder, preferably between the guides 4 and 5, which are located between the glue-pot and the cutting apparatus. The main wide strip of paper A to cover the side of the box or lid passes from the glue-pot over the top of the roller 16, then between the ears 35 and over the cross-bars 32, alternately over and under the series of rollers 15, 14, and 13, thence through the cutting apparatus, and finally to the edge of the box or lid upon the box-holder 9. The ornamental edge strips have been indicated by the reference characters B and C, and each of these strips passes from the glue-pot, under the rollers 16 and 17, thence between the pendent guide projections 37 and 38 of the respective guide members, and below the cross-bars 32, thence over and under the series of rollers 15, 14, and 13, thence through the cutting apparatus 8, and finally to the box or lid. After the strips of paper have thus been fitted in place the crank-handle 40 is operated to draw the guide members toward each other until the central wide strip A has a working fit between the guide members. Simultaneously with this adjustment of the guide members the edge strips B and C are drawn inwardly with the members, so as to underlie the respective longitudinal edges of the main strip. It will now be understood that the underface of the main central strip will adhere to the edge strips and the three strips will be fed as a single strip from the guide to the box in a very simple and effective manner without interfering with the operation of the machine in any manner whatsoever or requiring any change of the reels, glue-pot, cutting apparatus, and box-holder. Prior to passing through the guide the edge strips are disposed below, and thereby separated from the main strip A by the upper and lower rollers 16 and 17, and in passing through the guide the main strip passes over the top of the cross-bars 32 and the edge strips below the same and finally



come into contact, when they pass over the roller 15. Besides pressing the main strip into contact with the edge strips the rollers 13, 14, and 15 form a tension device to prevent looseness of the strips, and thereby insure a proper feed thereof.

As best illustrated in Fig. 5, it will be seen that it requires both of the guide members to form a guide for the main strip A, and by this arrangement the guide members may be moved toward and away from each other to accommodate the device to strips of different widths. As the ornamental edge strips are commonly of the same width, the guide for each strip is carried by the corresponding guide member—that is to say, the spaced pendent projections 37 and 38 of each guide member form a guide for one of the edge strips. Hence the latter is carried with the guide member in its adjustment, and thereby always underlies the main strip for a predetermined distance. To accomplish this feature, it will be observed that the upstanding ear 35 is disposed intermediate of the pendent projections 37 and 38, and hence the main strip always overlaps the edge strips.

From the foregoing description it is apparent that the device of the present invention is in the nature of an attachment for application to and removal from any ordinary form of paper-box-covering machine and is designed to effect a proper overlapping of the main strip of paper upon the ornamental edge strips, so as to have the three strips pasted together before they reach the cutting apparatus, whereby they are cut and applied to the box or lid as a single strip. Moreover, the attachment can be applied to the machine without interfering with any of the parts thereof, as it is supported upon the machine at a point between the front and rear supports for the strips of paper as they pass from the glue-pot to the cutting apparatus.

What I claim is—

1. A guide for box-covering machines, comprising a pair of spaced members having means for guiding an edge strip, the space between the members forming a guide for a covering-strip, and means located between the strips for simultaneously adjusting the members toward and away from each other.

2. A guide for box-covering machines, comprising a pair of spaced guide members, the space between the members forming a guide for a covering-strip, each member also having a guide for another strip, and means located between the covering-strip and the other strips for simultaneously adjusting the members toward and away from each other to vary the space between the same.

3. A guide for box-covering machines, comprising a pair of spaced guide members, the space between the members forming a guide for a covering-strip, one of the members having a guide for another strip, and means located between the strips for simultaneously

adjusting the members toward and away from each other to vary the space between the same.

4. A guide for box-covering machines, comprising a pair of spaced guide members, the space between the members forming a guide for an intermediate covering-strip, each member having a guide underlying the space between the two members, and arranged to receive an edge strip, and means for simultaneously adjusting the members toward and away from each other, said means being located between the covering-strip and the other strips.

5. A guide for box-covering machines, comprising a pair of spaced guide members, the space between the members forming a guide for an intermediate covering-strip, one of the members having a guide underlying the space between the two members to receive an edge strip, and means for simultaneously adjusting the members toward and away from each other, said means being located between the covering and edge strips.

6. A guide for box-covering machines, comprising a pair of spaced guide members, the space between the members forming a guide for an intermediate covering-strip, one of the members having a guide underlying the space between the two members and disposed at or near the bottom of the member to receive an edge strip, and means for simultaneously adjusting the members toward and away from each other to vary the space between the members, said means being located between the covering and edge strips.

7. A guide for box-covering machines, comprising a pair of spaced guide members, the space between the members forming a guide for an intermediate covering-strip, one of the members having a pair of pendent guide projections, one of which is disposed in front of the inner face of the member to form a guide for an edge strip, and means for adjusting the members toward and away from each other to vary the space between the members, said means being located between the covering and edge strips.

8. A guide for box-covering machines, embodying a frame having a guideway, a pair of spaced guide members mounted on the guideway for movement toward and away from each other, the space between the members forming a guide for the reception of a covering-strip, one of the members having a guide which underlies the space between the two members to receive an edge strip, and means carried by the frame for simultaneously adjusting the members toward and away from each other, said means being located between the covering and edge strips.

9. A guide for box-covering machines, embodying a frame having a guideway, a pair of spaced guide members slidably mounted upon the guideway, the space between the members and above the guideway forming a guide for the reception of an intermediate strip, one of the members having a pendent guide



disposed below the guideway and underlying the space between the two members to receive an edge strip, and means located between the strips for simultaneously adjusting the guide members.

10. A guide for box-covering machines, embodying a frame having a longitudinally-slotted guideway, a pair of spaced guide members slidably mounted in the slot of the guideway and provided with upstanding projections, the space between the projections being located above the guideway and forming a guide for the reception of an intermediate strip, one of the members having a pair of spaced pendent projections extending below the guideway to form a guide for an edge strip, one of the projections underlying the space between the members, and means located between the strips for adjusting the members toward and away from each other.

11. A guide for box-covering machines, embodying a frame having a longitudinally-slotted guideway, a pair of spaced guide members slidably mounted in the slot of the guideway and provided with projections rising above the guideway, the space between the projections forming a guide for the reception of a covering-strip, one end of each projection being extended beyond the guideway and provided with an inverted substantially L-shaped pendent projection which is disposed at the inner side of the member to form a guide for an edge strip, a pendent projection from the outer end of each member, and means located between the strips for adjusting the members toward and away from each other.

12. A guide for box-covering machines, comprising a pair of spaced guide members arranged to receive covering and edge strips and spacing the same apart and having registered reversely-screw-threaded openings, a shaft located in the space between the strips and having reversely-screw-threaded portions engaging the screw-threaded openings of the respective guide members, and means to turn the shaft for simultaneously adjusting the members toward and away from each other.

13. A guide for box-covering machines, comprising a frame, a longitudinally-slotted guideway extending across the frame, a shaft disposed in the slot of the guideway with its opposite ends journaled in the frame and provided with opposite screw-threaded portions, means for rotating the shaft, and a pair of spaced guide members mounted to slide in the slotted portion of the guideway and having screw-threaded openings receiving the respective screw-threaded portions of the shaft, said guide members being provided above and below the guideway and the shaft with guides to receive covering and edge strips and spacing the same.

14. A guide for box-covering machines, comprising a frame having a longitudinally-slotted guideway extending across the same, a shaft disposed in the slotted portion of the

guideway with its opposite ends journaled in the frame and having opposite screw-threaded portions, means to rotate the shaft, and a pair of spaced guide members mounted to slide within the slot of the guideway and having screw-threaded openings receiving the respective screw-threaded portions of the shaft, each member having an upstanding guide projection, one end of which is extended beyond the guideway and is provided with an inverted substantially L-shaped projection disposed at the inner side of the member, and also having a pendent projection at its outer end, said projections forming upper and lower guides to receive the covering and edge strips and the shaft and the guideway being located between the strips.

15. A guide for box-covering machines, comprising a frame, guiding means carried intermediately by the frame for overlapping an intermediate strip upon opposite edge strips, means carried by the frame to space the intermediate strip above the edge strips before engaging the guiding means, operating mechanism located in the space between the strips for adjusting the guiding means, means to press the intermediate strip into engagement with the edge strips after the strips leave the guide, and a supporting-frame adjustably receiving the said frame.

16. A guide for box-covering machines, comprising a frame, a longitudinal series of transversely-disposed rollers at one end of the frame, upper and lower rollers carried by the opposite end of the frame, a guideway disposed between the sets of rollers and transversely of the frame, spaced guides slidably mounted on the guideway, the space between the upper ends of the members above the guideway forming a guide for the reception of an intermediate strip, and spaced guide projections pendent from each member to receive edge strips, the intermediate and edge strips being located above and below the guideway, and the inner of each pair of projections underlying the space between the two guide members mounted for vertical and horizontal adjustment.

17. A guide for box-covering machines, comprising a substantially rectangular skeleton frame, a pair of cross-bars disposed intermediately of the frame and forming a guideway, a reversely-screw-threaded shaft mounted between the cross-bars with its opposite ends journaled in the sides of the frame, one end of the shaft being projected beyond the frame to permit rotation thereof, a pair of spaced guide members working between the cross-bars and having screw-threaded openings receiving the respective screw-threaded portions of the shaft, each member having an upstanding projection rising above the cross-bars, corresponding opposite ends of the projections being extended beyond the respective cross-bars and provided with inverted pendent substantially L-shaped projections which are disposed in front of the inner faces



of the members, pendent projections from the outer ends of the members, said projections forming upper and lower guides located above and below the guideway and the shaft to space covering and edge strips from the same, a longitudinal series of transversely-disposed rollers journaled in the opposite sides of the frame and disposed in front of the cross-bars, and a main frame adjustably supporting the skeleton frame.

18. A guide for box-covering machines, comprising a frame, spaced guide members carried by the frame and having an upper guide for a covering-strip and provided with lower guides underlying the upper guide to receive edge strips, means for simultaneously adjusting the members toward and away from each other, said means being located between the covering and edge strips, a bracket disposed transversely of the frame and connected thereto, and means carried by the opposite ends of the bracket for connection with a box-covering machine.

19. The combination with a supporting-frame and a covering-strip guide for box-covering machines, having simultaneously-movable laterally-adjustable elements, of a bracket carrying the guide, the latter being adjustable vertically and horizontally upon the bracket, and hangers depending from the supporting-frame and connected to the bracket.

20. The combination of a supporting-frame, a reel mounted on the supporting-frame, a box-holder, a bracket disposed transversely of the supporting-frame and provided with hangers depending therefrom and adjustable longitudinally thereof, a covering-strip guide, and means extending upward from the bracket for supporting the guide between the reel and the box-holder in approximately the same plane as the former, substantially as described.

21. The combination of a supporting-frame, a bracket disposed transversely of the supporting-frame and provided with hangers depending from the same, a reel mounted on the supporting-frame, a box-holder, a covering-strip guide, and a support receiving the guide and adjustable vertically and transversely of the supporting-frame and holding said guide in approximately the same plane as the reel, substantially as described.

22. The combination of a supporting-frame,

a reel mounted thereon, a box-holder, hanger-arms depending from opposite sides of the supporting-frame, a transverse bracket-bar connecting the arms and arranged at the lower ends thereof, a support rising from the bracket-bar and adjustable vertically thereon and transversely of the supporting-frame, and a covering-strip guide mounted on the support and located in approximately the same plane as the reel, substantially as described.

23. The combination of a supporting-frame, a covering-strip guide for box-covering machines, a bracket provided with hangers depending from the supporting-frame, and a standard mounted for vertical and horizontal adjustment upon the bracket and supporting the guide.

24. The combination with a covering-strip guide for box-covering machines, of a bracket provided with hangers depending from the main frame of a box-covering machine, and a standard adjustable at substantially right angles upon the bracket and connected to the guide.

25. The combination with a covering-strip guide for box-covering machines, of a longitudinally-slotted bracket having means for connection with the main frame of a box-covering machine, a longitudinally-slotted standard crossing the slotted portion of the bracket and connected to the guide, and a detachable fastening extending through the slotted portions of the bracket and standard.

26. The combination with a main frame and a covering-strip guide for box-covering machines, of a bracket embodying a longitudinally-slotted bar disposed below the guide, opposite hanger-arms connected to the bar and with the main frame, a standard having a forked upper end connected to the guide and provided with a longitudinal slot, and a detachable fastening passing through the crossed slotted portions of the standard and the bar.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ROBERT ANDREW THOMPSON.

Witnesses:

E. HARRY THOMPSON,

W. WALTER K. ATHEY.