

No. 750,703.

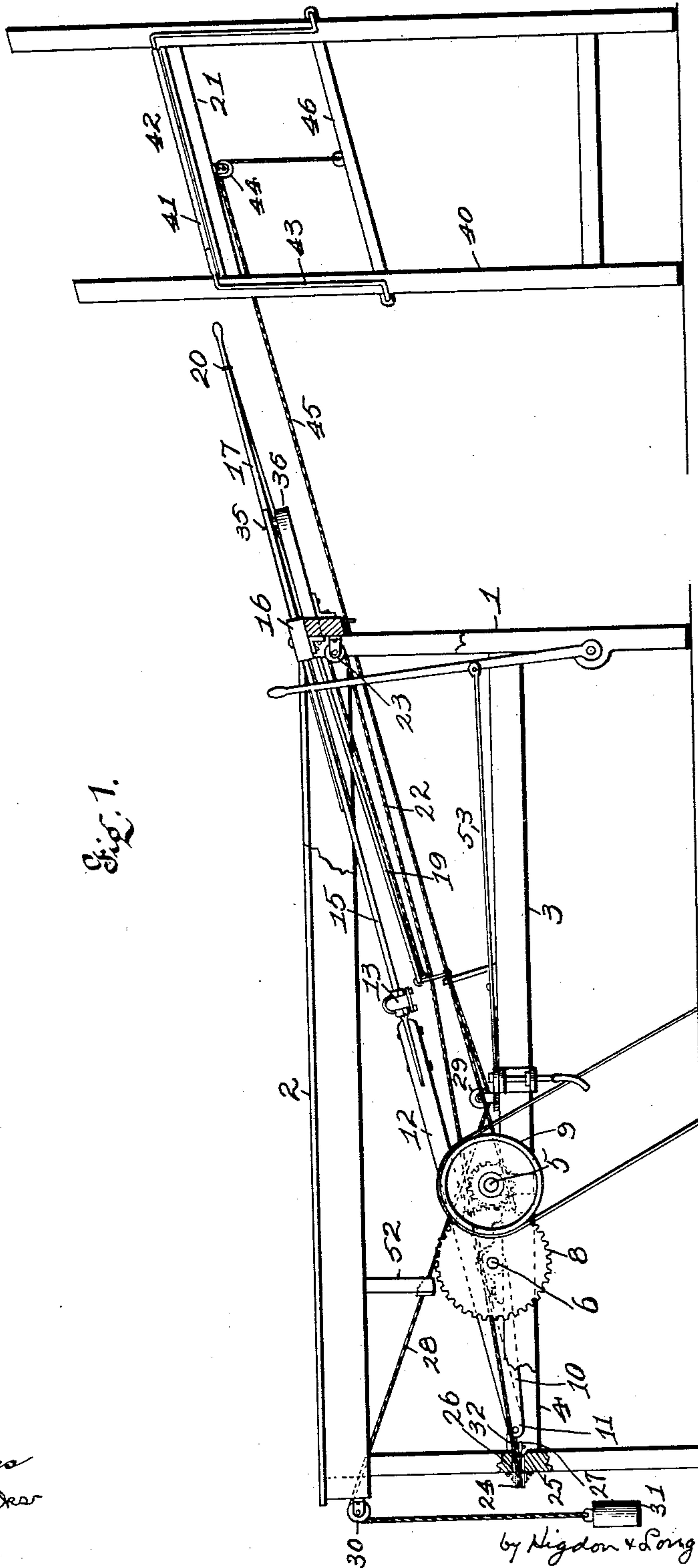
PATENTED JAN. 26, 1904.

H. ROPPEL.
BAG TURNER.

APPLICATION FILED JUNE 9, 1903.

3 SHEETS—SHEET 1.

NO MODEL.



Witnesses
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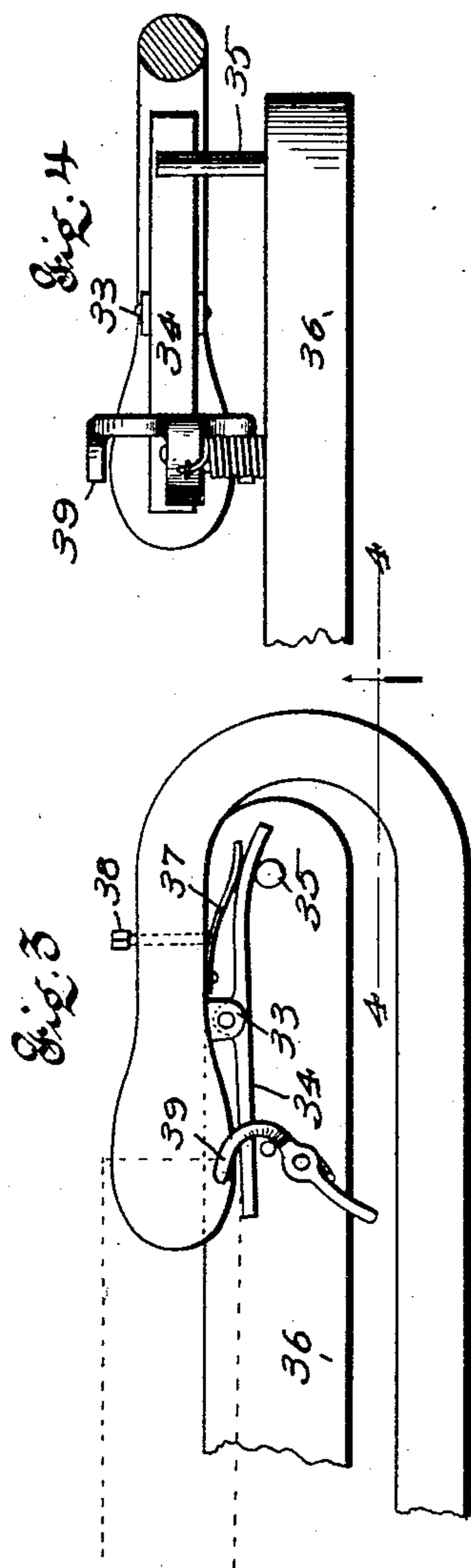
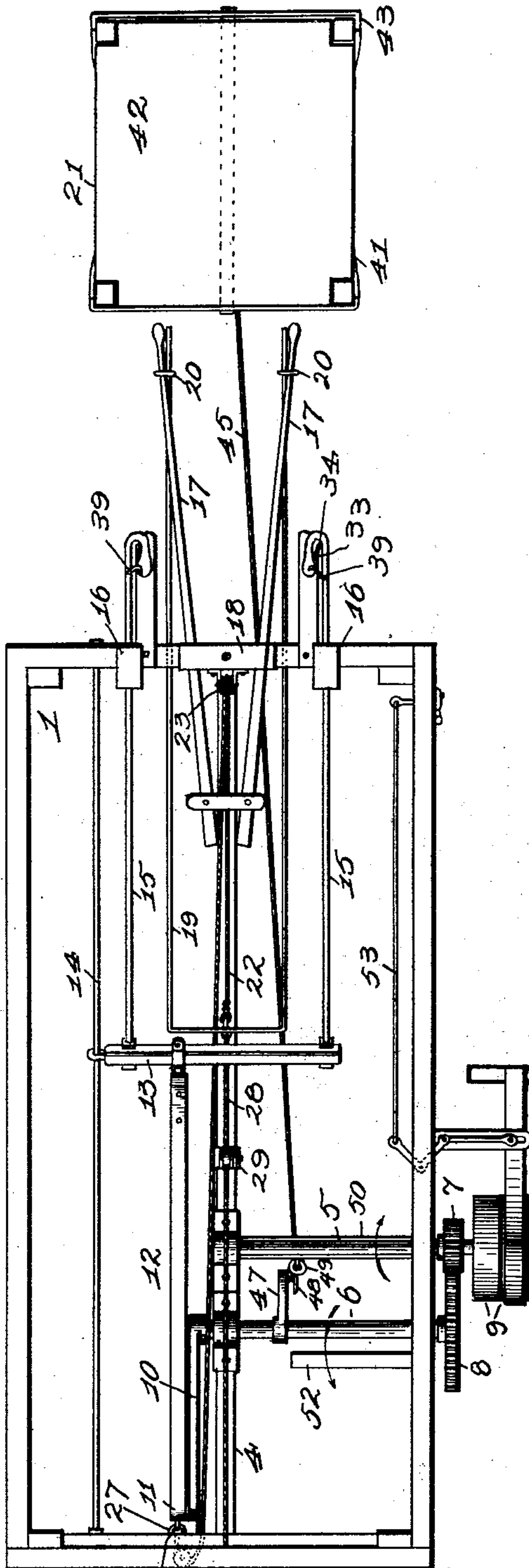


Fig. 2



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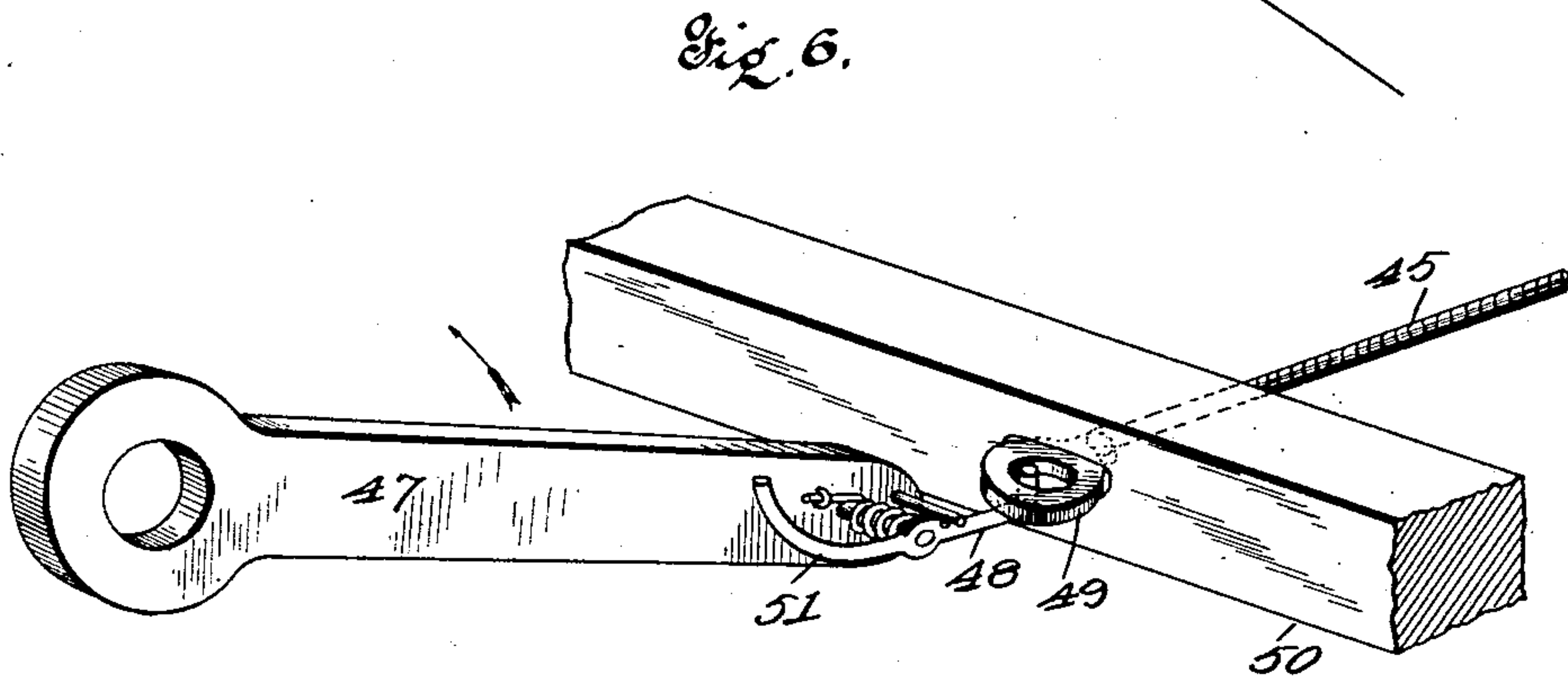
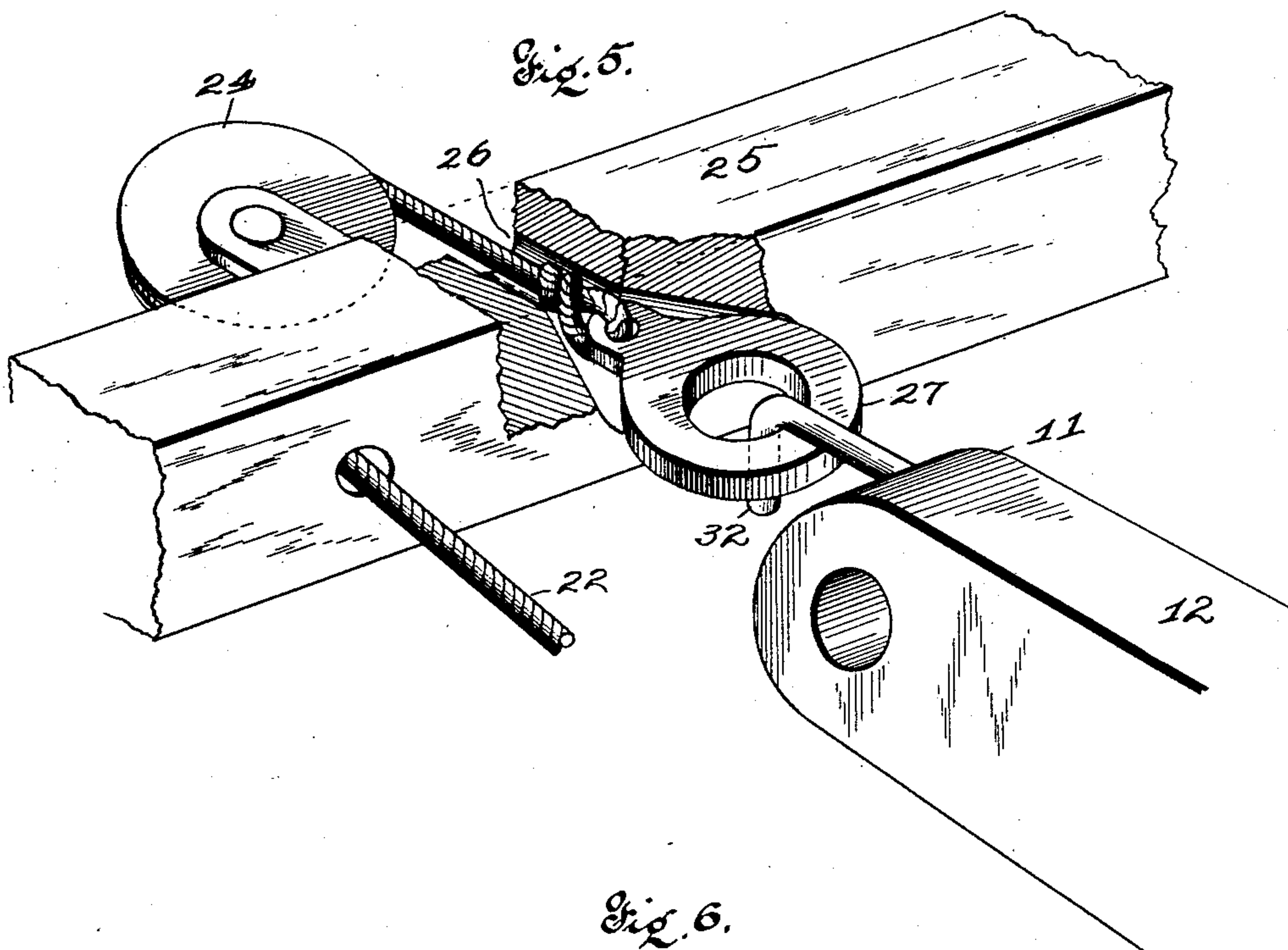
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

HENRY ROPPEL, OF ST. LOUIS, MISSOURI.

BAG-TURNER.

SPECIFICATION forming part of Letters Patent No. 750,703, dated January 26, 1904.

Application filed June 9, 1903. Serial No. 160,765. (No model.)

To all whom it may concern:

Be it known that I, HENRY ROPPEL, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Bag-Turners, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in bag-turners, and has for its object to provide means whereby bags of paper, cloth, or other fabric may be turned and delivered upon a suitable receptacle.

In the drawings which form a part of this specification, Figure 1 is a side view of a device embodying my invention. Fig. 2 is a top view of the same. Fig. 3 is a plan view of the clamping end of one of the bag-holding arms used in carrying out my invention. Fig. 4 is a detailed sectional view of the same, taken on the line 4-4 of Fig. 3 viewing it in the direction as indicated by the arrow. Fig. 5 is a detailed enlarged perspective view of the mechanism used in operating the yoke for delivering the bag upon the table. Fig. 6 is a detailed perspective view of the mechanism used for raising the cover of the table under which the bag is delivered.

In the construction of my invention I provide a suitable frame 1, supporting a table 2, upon which the bags to be turned are placed. Said frame 1 is provided with side beams 3 and a center beam 4. Upon the center and one of the side beams are mounted, by means of proper bearings, shafts 5 and 6, the said shaft 5 carrying a pinion 7, which meshes with a gear-wheel 8, carried by the shaft 6 and operated by the usual tight and loose belt-pulleys 9. To the opposite end of the shaft 6 is provided the crank-arm 10, its free end being pivotally connected to the end 11 of a connecting-bar 12, the opposite end of the bar 12 being pivotally connected to a cross-bar 13, which is guided upon the stationary guide-rod 14, carried by the frame 1. Rods 15 are secured to the cross-bar 13 and are guided through the blocks 16, mounted upon the frame, and their free ends are hook-shaped, the purpose of which will be fully hereinafter described.

Upon the frame 1 and arranged at an angle both vertically and horizontally are bag-turning arms 17, which are clamped upon said frame by means of the clamping-block 18. The free ends of the said turning-arms are somewhat larger than the remaining portion and are pear-shaped, this being for the purpose of allowing the bag to freely pass over the same and prevent tearing or catching.

A yoke 19 is arranged to operate in alignment with the bag-turning arms 17, the free ends thereof being guided in loops 20, retaining said yoke in alinement to pass within the bag and deliver it upon the table 21. The cord 22 is connected to the horizontal portion of the yoke 19, passing over a roller 23, secured to the frame and extending rearwardly to the opposite end of said frame, guided over a roller 24, located at the rear side of the cross-piece 25, passing through the opening in said cross-piece 25, and attached to the eye 27. To the horizontal portion of the yoke 19 is also attached a cord 28, passing downwardly and guided under a roller 29, extending upwardly through the frame and over a roller 30, located upon the rear side of the machine and its free end attached to a weight 31.

The end 11 of the connecting-bar 12 is provided with a hook 32, this being for the purpose of engaging the eye 27 during the rotation of the crank-arm 10, pulling the cord 22, bringing the yoke 19 forward, and the said hook 32 is released from the eye when the bar 12 is at a point positioned opposite to that indicated in Fig. 2. The yoke 19 is brought to its normal position by means of the weight 31 pulling upon the cord 28.

Referring to the ends of the rods 15, I will now describe the construction of the clamp for holding the bag.

The end of the hook is enlarged and rounded and is provided with projecting ears 33. A clamp-lever 34 is pivotally held between the ears 33, the one end thereof being slightly curved outwardly and arranged to come in contact with a post 35, carried upon the stationary arms 36, which are rigidly mounted upon the upper member of the frame.

A spring 37 is secured to the rod 15, its free end bearing against the lever 34, causing

the opposite end of said lever to engage with the enlarged rounded portion of the hook. This forms the clamp in which the bag is held while being carried forward to be turned. A set-screw 38 is provided for regulating the tension of the spring 37.

Upon the stationary arms 36 are provided spring-actuated hooks or fingers 39, which are so arranged with its fingers located one above and one below in alinement with the clamping-surfaces of the said clamp. The purpose of the hooks 39 is to receive the bag, holding the same in an open position and allowing the clamp to grip said bag automatically and carry the same forward automatically, releasing said bag from the hooks 39, which action is caused by the pulling forward upon the projecting fingers of the hooks, and when released the tension of the spring controlling said hooks will replace said hooks in their normal position.

The table 21 is composed of a frame 40, on which is mounted a reciprocating frame 41, composed of the plate 42, provided with outwardly and downwardly projecting arms 43, which are guided during its reciprocating movement by the vertical members of the frame 40, and beneath the table 21 is provided a roller 44, over which a cord 45 is passed, the one end thereof being connected to a cross-bar 46, connected to the reciprocating frame. The reciprocating frame is operated by the pulling of the cord 45, which action is obtained by means of the crank-arm 47, carried by the shaft 6. The crank-arm 47 is provided with a spring-actuated hook 48, arranged to come in contact with an eye 49, secured to the end of the cord 45, and is normally held in a horizontal position by the bar 50, located beneath the shaft 5. The crank-arm 47 is operated in the direction indicated by the arrow in Fig. 6. The hook 48 engages the eye 49, pulling upon the cord 45, raising the reciprocating frame, and said hook 48 is released from the eye by means of the curved arm 51 of said hook coming in contact with the projecting arm 52, carried by the frame 1 and located at a proper height to raise the curved arm 51 while said hook is passing over the said projecting arm.

The belt is shifted upon the tight and loose pulleys by means of a belt-shifting device 53, consisting of a lever, a connecting-rod, a bell-crank lever, and the ordinary belt-fork.

The operation of my invention is as follows:

The bags are placed upon the table 2, the operator placing the open end of said bag upon the hooks 39, the clamping ends of the bag-turning rods are brought in contact with the edge of the bag extending vertically between the fingers of the hooks 39 and clamping the same, and the said bag is carried forward by means of the rotation of the crank-arm 10 and the forward action of the connecting-bar 12 pressing the bag-turning rods 15 forward until the crank-arm 10 is turning on the half-stroke.

The bag-turning rods are then beginning to be brought rearwardly, the bag passing over the ends of the arms 17. At this same operation the yoke 19 has just delivered one bag upon the table and the eye 27 has been released from the hook 32, and by means of the weight 31 the said yoke is returned to its normal position and will remain in such position until the clamping ends of the bag-turning rods are again advancing with another bag. The bag which has just been turned is held upon the arms 17 and is removed from said arms by said yoke, and during the forward movement of the yoke 19 the crank-arm 47 is pulling upon the cord 45, raising the reciprocating frame 41, and allowing the bag carried upon the yoke to be delivered beneath the plate 42 of the reciprocating frame. At the same time that the yoke is released from the bag the cord is released and the reciprocating frame by its gravity falls in position and retains the bag upon the table in a flat and unwrinkled position.

It will be observed by referring to Figs. 5 and 6 that the eyes upon the cords are held in a horizontal position, which is caused by the elongated arrangement of the entrance of the openings through the bars.

Having fully described my invention, what I claim is—

1. An improved bag-turner, comprising a suitable frame, a table located upon said frame, arms projecting from said frame over which the bags are turned, a yoke operated within said frame, its ends projecting and provided with clamps, bars projecting from said frame in alinement with said yoke, hooks located upon said arms for holding the edge of the bag in alinement with the clamps of the yoke, a mechanism located within said frame for operating the yoke, a delivery device operating beneath the projecting arms and adapted to pass within the turned bag and deliver it from said arms, and means whereby the devices are operated and automatically released during the operation of the device, substantially as specified.

2. An improved bag-turner, comprising a suitable frame, a yoke slidably mounted at an incline in said frame, clamping devices formed on the ends of said yoke whereby the end of the bag is held, a pair of projecting arms arranged in line with the movement of the yoke and projecting from the frame, knobs formed on the end of said arms for the free movement of the bag when pulled thereover, a shaft located within the frame provided with a crank whereby the yoke is reciprocated, wires projecting through said frame and in alinement with the projecting arms and arranged to pass within the bag when turned, a hook formed on the end of the yoke-operating device, a cable provided with an eye operated by the yoke-operating device, said wires being advanced forward when the cable is pulled upon and re-

5 leased at a given period during the operation, a table automatically raised and lowered by the operation of the device to receive the bag when delivered from the projecting arms, substantially as specified.

10 3. An improved bag-turner, comprising a reciprocating yoke for advancing the bag in its unturned position, bringing it in contact with projecting arms and turning said bag during its backward movement, an automatic means to deliver the bag from said arms and locating it upon a table, and a means for automatically operating and releasing the movement of the delivery device, substantially as specified.

20 4. An improved bag-turner, provided with a reciprocating yoke, a shaft provided with a crank for imparting motion to said yoke, arms projecting from a frame over which the bag is turned, wires located beneath the project-

ing arms and arranged to pass within the bag and deliver it from said arms when turned, a cable automatically operating and releasing said wires at a given time, a table adapted to be raised and lowered by the operation of the device for receiving the bag when delivered from the arms, clamping devices arranged upon the ends of the yoke for gripping the bag, and a means whereby the bag is held in position to be received by the clamping devices for repeating the bag-turning operation, substantially as specified.

In testimony whereof I have signed my name to this specification in presence of two subscribing witnesses.

HENRY ROPPEL.

Witnesses:

ALFRED A. EICKS,
M. G. IRION.