

G. E. & E. D. SCOTT.
 FILLED SACK SEWING MACHINE.
 APPLICATION FILED FEB. 15, 1909.

1,026,833.

Patented May 21, 1912.

6 SHEETS—SHEET 1.

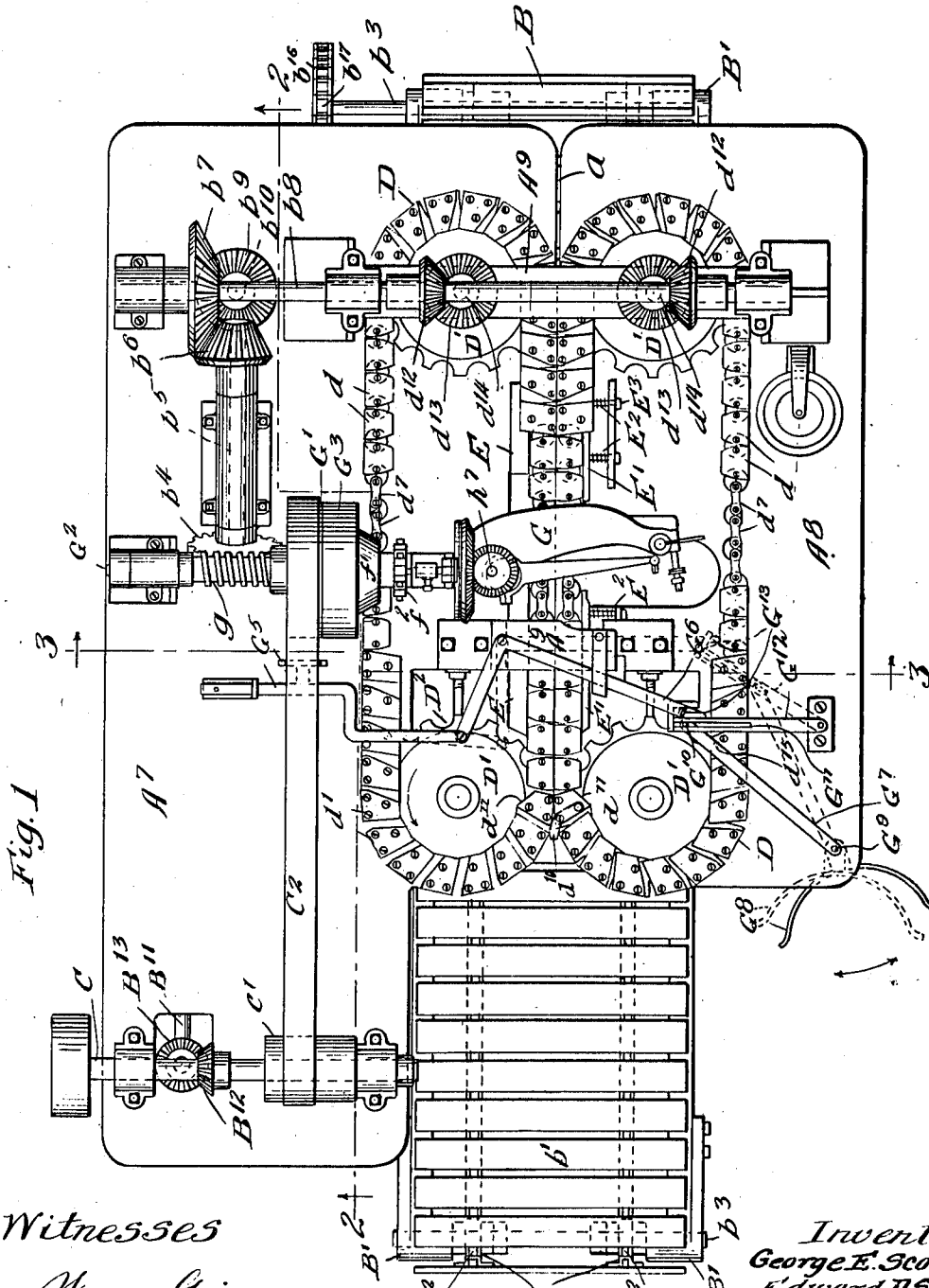


Fig. 1

Witnesses

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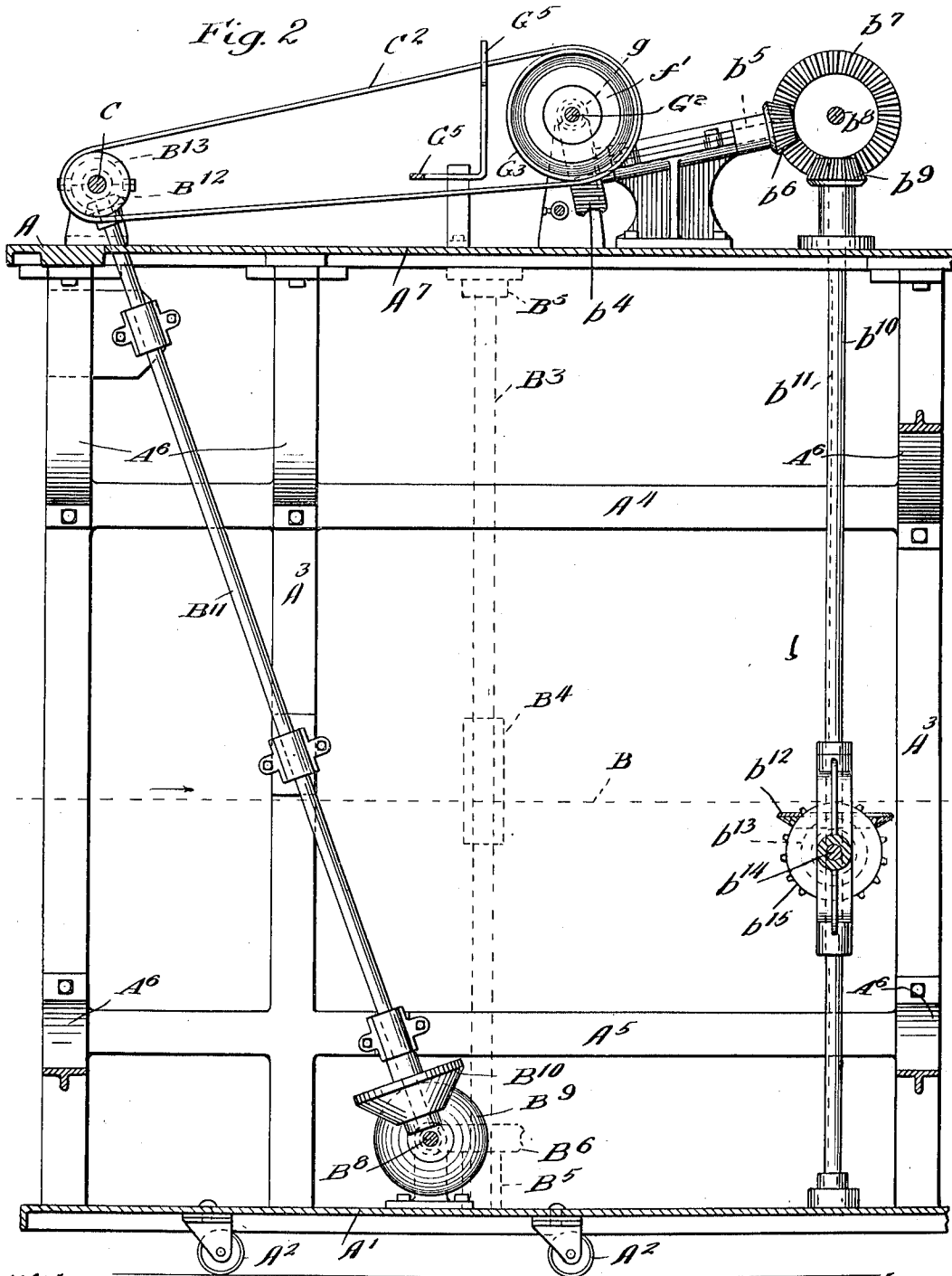
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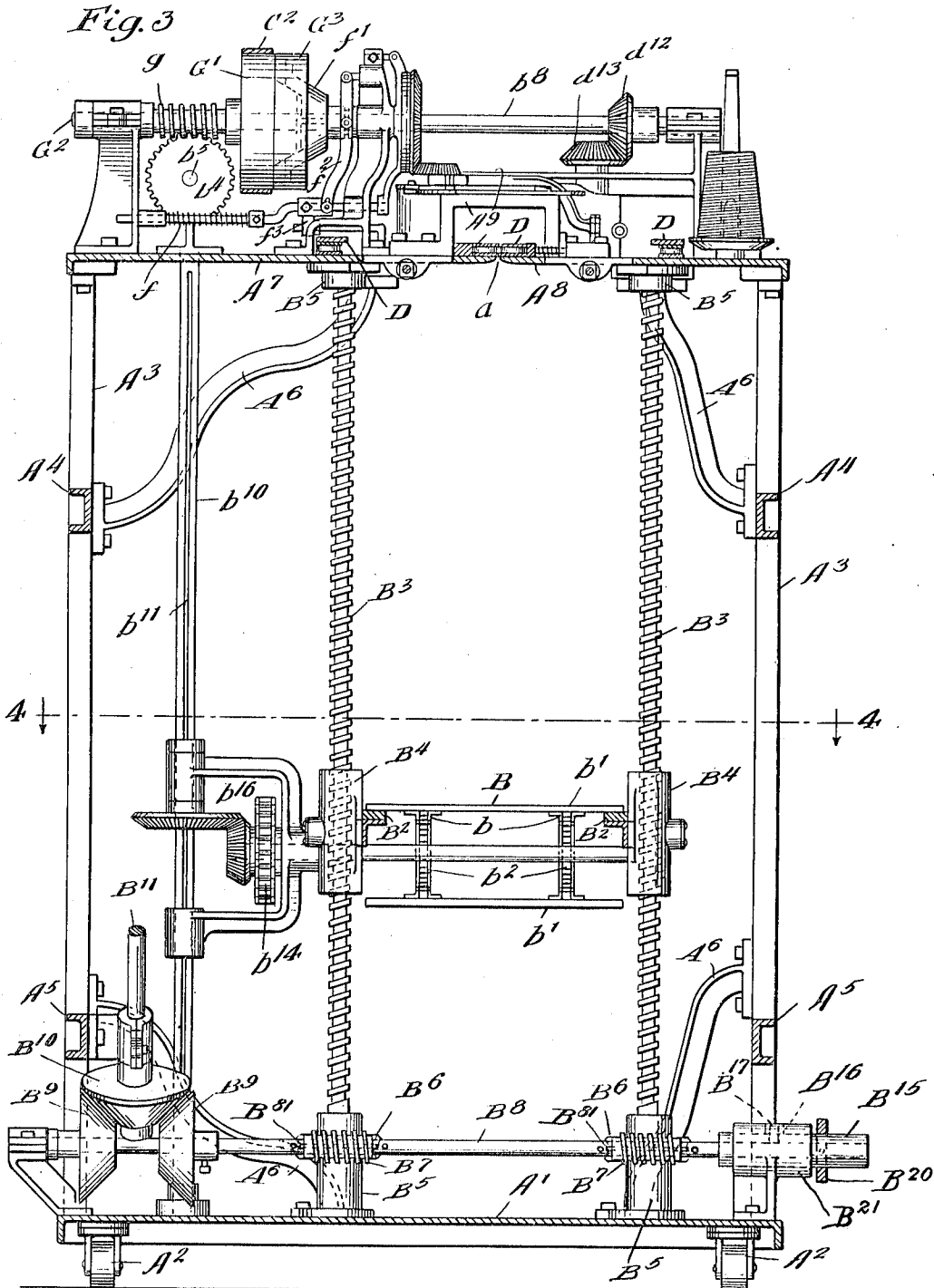
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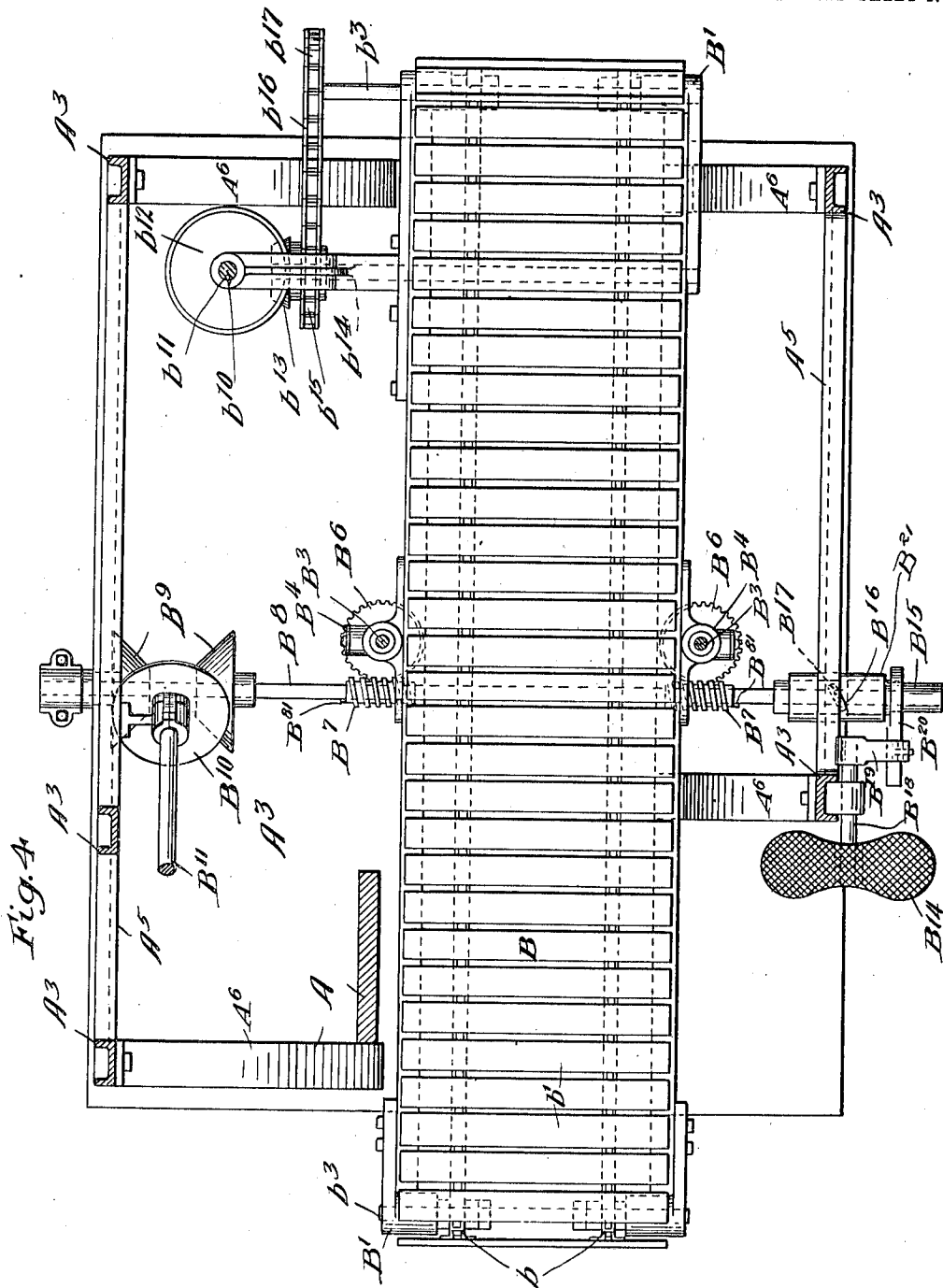
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6 SHEETS—SHEET 4.



Witnesses:

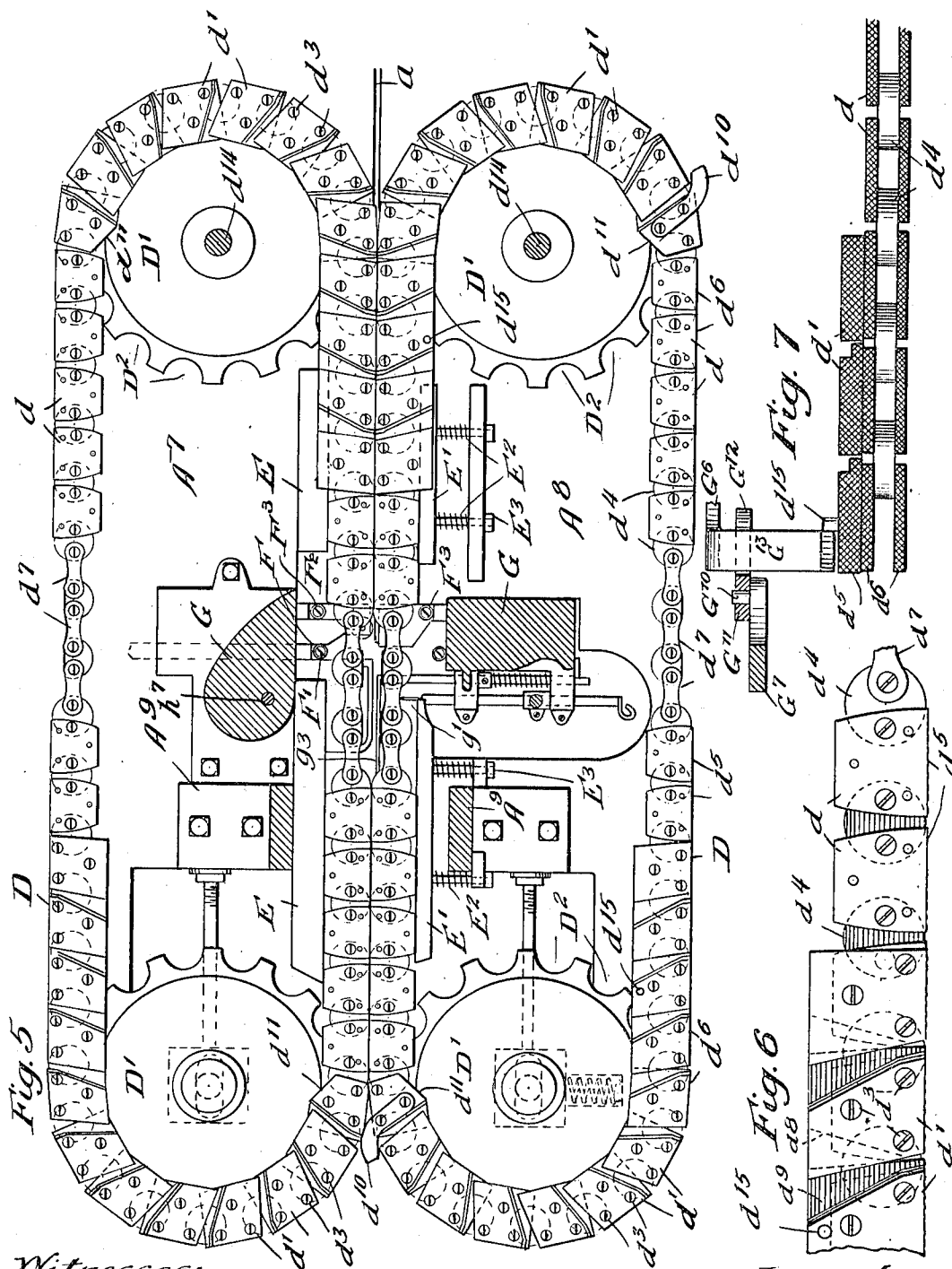
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6 SHEETS—SHEET 5.



Witnesses:

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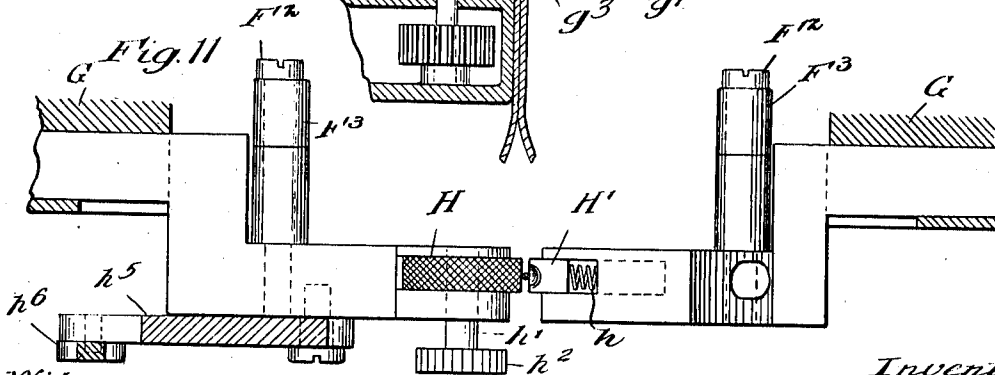
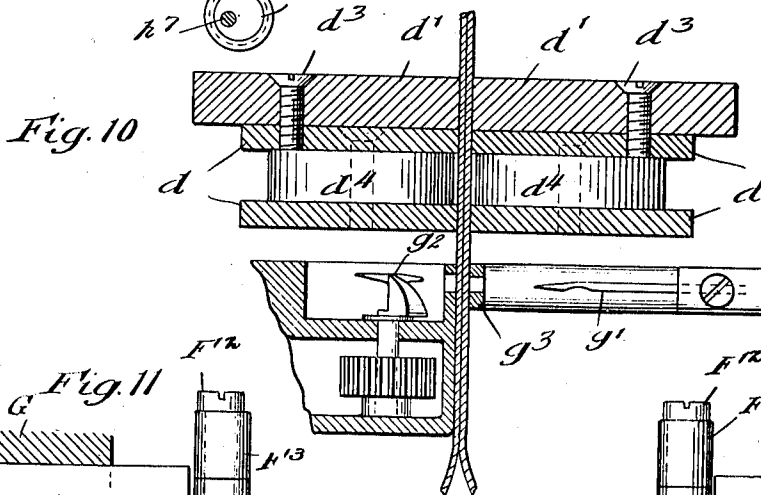
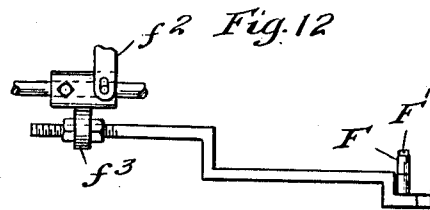
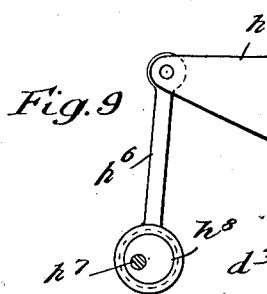
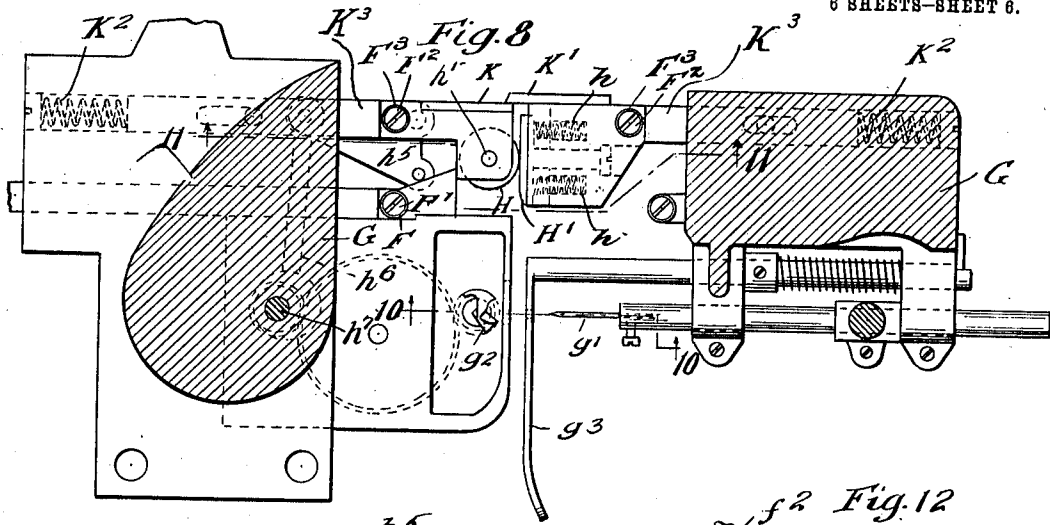
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6 SHEETS—SHEET 6.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE E. SCOTT AND EDWARD D. SCOTT, OF CHICAGO, ILLINOIS, ASSIGNORS, BY
MESNE ASSIGNMENTS, TO TIMEWELL SACK FILLING AND SEWING MACHINE
COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

FILLED-SACK-SEWING MACHINE.

1,026,833.

Specification of Letters Patent.

Patented May 21, 1912.

Application filed February 15, 1909. Serial No. 477,901.

To all whom it may concern:

Be it known that we, GEORGE E. SCOTT and EDWARD D. SCOTT, citizens of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Filled-Sack-Sewing Machines, of which the following is a specification.

Our invention relates to improvements in filled sack sewing machines.

The object of our invention is to provide an automatic machine of a simple, efficient and durable construction, by means of which filled sacks of various sizes may be rapidly and cheaply sewed.

The automatic machine containing the preferred embodiment of our invention comprises a sewing mechanism adapted to sew the mouth of a filled sack as it is conveyed past the same, and operating mechanism therefor, a vertically adjustable endless flexible sack conveyer for conveying the sacks past the sewing mechanism, power driven mechanism for automatically adjusting the sack conveyer up and down to accommodate sacks of different lengths or sizes, power driven mechanism for automatically operating the sack conveyer in different positions to which it may be adjusted by said adjusting mechanism, a pair of endless flexible sack holder chains furnished with removable clamps or holders for clamping together the mouth edges of sacks of different widths or sizes, means for automatically stopping and starting said sack holder chains, guides for supporting and holding the parallel portions of said chains in sack clamping relation to each other, a yielding backing or support for one of said guides, a stop gage for the front edge of the sack mouth on one of said sack holder chains to insure the sack mouth being inserted in proper relation to each set of sack holders or clamps on the chains, means for automatically stopping and starting the sack holder chains at the sack receiving position, means for automatically starting and stopping the sewing mechanism as each set of sack holder clamps on the sack holder chains presents a sack into sewing position with the needle of the

sewing mechanism and delivers it therefrom, a chain or thread feeder and holder and a chain or thread cutter and means for automatically operating the said feeder and cutter.

Our invention consists in the various novel combinations and subcombinations of these parts, and in the novel construction of parts and devices and novel combinations of parts and devices herein shown and described, and more particularly specified in the claims.

In the accompanying drawing forming a part of this specification, Figure 1 is a plan view of a filled sack sewing machine embodying our invention. Fig. 2 is a longitudinal vertical section on the broken line 2—2 of Fig. 1. Fig. 3 is a vertical cross section on line 3—3 of Fig. 1. Fig. 4 is a horizontal section on line 4—4 of Fig. 3. Fig. 5 is a detail plan view partly in horizontal section of the sack holder mechanism. Fig. 6 is a detail plan view of a short portion of one of the sack holder chains. Fig. 7 is a detail elevation of a short portion of one of the sack holder chains. Fig. 8 is a detail plan view of the sewing mechanism partly in horizontal section. Fig. 9 is a detail plan of the thread feeder of the sewing mechanism. Fig. 10 is a detail vertical section on line 10—10 of Fig. 8 showing the needle and other parts. Fig. 11 is a detail vertical cross section on line 11—11 of Fig. 8. Fig. 12 is a detail view of the controlling device and other parts.

In the accompanying drawing forming a part of this specification, A represents the frame of the machine, it being of any desired construction suitable for giving support to and accommodating the various parts of the machine. It preferably has a bed member A¹ resting upon caster wheels A² to enable the machine to be readily moved from one part of the factory to another, suitable uprights A³, cross frame members A⁴ A⁵, braces A⁶, and a divided top plate A⁷ A⁸ with a slot or passage *a* between the two members A⁷ A⁸ of this top plate to accommodate the mouths of the sacks to be sewed, and raised connecting

bridges A³ to secure the two members of the divided top plate rigidly and firmly together.

B is a vertically adjustable endless flexible sack conveyer, the same preferably comprising a pair of chains *b*, the links of which are furnished with connecting slats *b*¹ upon which the sacks directly rest. The sack conveyer chains *b* are mounted on pulleys or sprocket wheels *b*², the shafts *b*³ of which are journaled on the conveyer frame B¹ which is provided with supporting rails B² for the ends of the conveyer slats to rest upon. The sack conveyer or its frame B¹ is automatically adjusted up and down as required to accommodate sacks of different lengths or sizes from the main driving shaft C through suitable connecting mechanism, the same preferably comprising two upright lifting screws B³, the threads of which turn in suitable nuts or threaded sleeves B⁴ on the conveyer frame B¹, one on each side of the conveyer frame near the middle thereof, and which lifting screws B³ are journaled at their upper and lower ends in suitable bearings B⁵ on the frame of the machine, and which lifting screws are provided at their lower ends with worm gears B⁶ which mesh with worms B⁷ on the cross shaft B⁸, which is furnished with bevel friction gears B⁹ adapted to engage a bevel friction gear B¹⁰ on a shaft B¹¹, having at its upper end a bevel gear B¹² meshing with a bevel gear B¹³ on the driving shaft C. The worm shaft B⁸ is adapted by a spline B⁸¹ to slide in the worms B⁷ to the very slight extent necessary to enable either one of the friction gears B⁹ to be thrown into and out of engagement with the bevel friction gear B¹⁰, and thus clutch and unclutch the worm shaft B⁸ from the shaft B¹¹ which connects it with the driving shaft C. The worm shaft B⁸ is thus reciprocated when required to automatically connect the sack conveyer lifting or adjusting screws with the power shaft by means of a foot lever or treadle B¹⁴ the shaft B¹⁸ of which has an arm B¹⁹ connecting with an arm B²⁰ on the sleeve B¹⁵, said sleeve and fixed bearing B²¹ of the shaft B⁸ being furnished with interengaging devices B¹⁶ B¹⁷, preferably consisting of a cam slot in one member engaging a pin on the other. The operator by simply pressing his foot on the foot treadle can very quickly connect the lifting screws with the power shaft C either for raising or lowering the sack conveyer, one of the clutch acting friction gears B⁹ serving to turn the worm shaft B⁸ and lifting screws B³ in the direction necessary for raising the sack conveyer, and the other friction clutch acting gear B⁹ in the direction necessary for lowering the sack conveyer, according as the treadle B¹⁴ is rocked to one side or the other.

The endless flexible sack conveyer B is au-

tomatically driven or operated from the driving shaft C through suitable connecting mechanism, preferably comprising a pulley C¹ on the driving shaft, belt C², a pulley G¹ on the sewing mechanism shaft G², a worm *g* on said shaft engaging a work gear *b*⁴ on the countershaft *b*⁵, which is furnished with a bevel gear *b*⁶ engaging a bevel gear *b*⁷ on the cross shaft *b*⁸, and which meshes with a bevel gear *b*⁹ on the upright shaft *b*¹⁰, which is furnished with a spline *b*¹¹ and sliding bevel gear *b*¹², which meshes with a bevel gear *b*¹³ on shaft *b*¹⁴ which carries a sprocket wheel *b*¹⁵ connected by chain *b*¹⁶ with a sprocket gear *b*¹⁷ on the shaft *b*³ of the sack conveyer chain *b*².

The endless flexible sack holder chains D D are mounted on horizontal pulleys or sprocket wheels D¹ D¹ D¹ D¹ and travel upon the top plate A⁷ A⁸, one on each side of the longitudinal slot or passage *a* so as to clamp between them the mouth of the sack and hold it in position for sewing as the same is conveyed past the sewing mechanism or needle. The adjacent parallel portions of the sack holder chains D are yieldingly held and guided in sack holding or clamping relation to each other by means of guides E E¹ between which such adjacent parallel members of the chains D D pass, and one of these guides E¹ has a spring or elastic backing or support, preferably consisting of coiled springs E², surrounding screws E³ so as to cause the sack holder chains to exert a proper but yielding clamping pressure upon the mouth of the sack held between them.

Each of the sack holder chains D D is composed of a plurality of links *d*, and these links are provided with removable and sectional sack clamping plates or devices *d*¹, one preferably on each link, and removably secured thereto by screws *d*² so that a greater or less number of these sack holding clamp members or plates may be employed in each set according to the size or width of the sacks to be from time to time sewed in the machine. Each sack holding link *d* is preferably double, or composed of an upper and lower plate, which receive between them a connecting link *d*⁴, preferably of circular disk form and to which adjacent sacking holding links *d* are pivotally connected by pins.

As illustrated in the drawing, the sack holder chains are shown as being provided each with two sack holders, each sack holder having a series of twelve sack holding clamp members or plates *d*¹, the series of twelve plates representing the width of the sack mouth intended to be sewed. If the sack mouth is narrower, a less number of clamp members or plates *d*¹ are employed in each sack holding set or series of plates, and if the sack to be sewed has a wider mouth, a

greater number of sack holding clamp members d^1 are employed for each set or series. The sack holder plates d^1 have corrugated, knurled or roughened opposing gripping faces d^5 to cause them to have a greater gripping action on the fabric of the sack mouth, and the sack holder links d are also preferably furnished with similarly knurled or roughened faces d^6 so that they may also exert a holding or gripping action upon the sack mouth. Each sack holder chain is also preferably furnished with one or more oblong or plain links d^7 between adjacent sack holding sets or series of links d which carry the sack holding plates d^1 . The pulleys or sprocket wheels D^1 for the sack holder chains D are furnished with curved notches D^2 for engagement with the circular or disk-like links d^4 of the sack holder chain.

Each of the sack holder plates or clamp members d^1 of the chain D is preferably furnished with a notched portion d^8 adapted to receive a similarly but reversely notched portion d^9 of the plate of an adjacent link so that the adjacent plates d^1 d^1 may overlap each other and thus prevent the sack holder links from tilting one in respect to the other and thereby interfering with the proper gripping or holding action on the sack mouth.

Each set or series of sack holder links d and clamp members or plates d^1 on one of the sack holder chains D is provided at or near the front end of the series with a gage or stop arm d^{10} for the front edge of the sack to abut against, and thus insure the sack mouth being inserted in a fixed and proper relation to each sack holder set or series of links on the chains D , and thus enable the sewing mechanism which is started or set in operation by each sack holder series of links as the same begins to pass the sewing mechanism and thus enable the sewing to begin properly at the front edge of each sack mouth in the passing sack holder or series of sack holding links.

The front sack holding plates d^1 of each sack holding set or series of links constituting a sack holder are furnished with inclined or cam-like faces d^{11} which engages the movable starting device F mounted adjacent to the sack holder chains, and by which the sewing mechanism G is set in operation at the proper instant. The movable sewing mechanism starting or controlling device F is preferably furnished with a spring f which returns it to normal position and stops the sewing mechanism after each sack holding series of links or plates d^1 pass, the sewing mechanism thus being kept in operation a greater or less time according to the number of plates d^1 in each sack holder series of plates and according to the width of the sack to be sewed.

The sewing mechanism controlling device

F preferably stops or starts and controls the operation of the sewing mechanism through a movable clutch f^1 with which it is connected by a suitable clutch lever f^2 and link f^3 . The sewing mechanism may be of any suitable or desired construction adapted for use in sewing the mouths of filled sacks. It preferably comprises a frame or arm to which the reference letter G is particularly applied, and attached to the top plate of the frame at one side of the slot a , and overhanging said slot and the adjacent parallel portions of the sack holder chains, D , D , and a needle g^1 , looper g^2 , presser foot g^3 , driving pulley G^3 , shaft G^2 , and suitable gearing or connecting mechanism for communicating motion to the needle and looper from the shaft G^2 of the sewing mechanism. The sewing mechanism shaft G^2 receives its motion from the driving shaft C as before stated, through the belt C^2 which may be shifted by hand when desired from the driving pulley G^3 to a loose pulley G^1 on the shaft G^2 by a belt shifter G^5 having an operating lever G^6 which the operator may actuate with his leg through a lever G^7 and yoke G^8 . The leg yoke G^8 is fixed upon the upright rock shaft or pivot G^9 of the lever G^7 , and said lever carries at its inner end a pin G^{10} which works in a slot G^{11} of a guide lever G^{12} which engages the downwardly bent arm G^{13} of the bent lever G^6 , and which bent arm G^{13} of said lever G^6 projects in the path of the pin or projection d^{15} on the clamp plate d^1 of the chain D when said bent lever g^6 stands in the position indicated in dotted lines on Fig. 1, or as more fully shown in Fig. 7.

The operation of the sewing mechanism is controlled or automatically stopped and started as each sack holder set or series of sack holding links on the chains D approach and leave or pass the sack sewing mechanism by the sewing mechanism controlling or stopping and starting device F before described. The endless flexible sack holder chains D are automatically operated from the power shaft C through suitable operating or connecting mechanism, the same comprising preferably the means before described for communicating motion to the cross shaft b^8 and bevel gears d^{12} on said cross shaft meshing with bevel gears d^{13} on the upright shafts d^{14} of one pair of the sprocket wheels D^1 of the sack holding chain D . The opposing endless flexible sack holding chains D are automatically stopped and started at the sack receiving position or just before the opposing pairs of front sack holding links and clamp plates d^1 , one of which bears the gage d^{10} for the front edge of the sack to abut against, approach each other by any suitable connecting and disconnecting acting device in the mechanism which communicates motion

from the power shaft to the sack holding chains D D; the same preferably or most often consisting in the belt shifter G⁵ and loose and fast pulleys G¹ G³, one of the sack holding chains D being furnished with a pin or projection d¹⁵ which engages the belt shifter lever G⁶ and operates the same to shift the belt from the fast pulley G³ to the loose pulley G¹, thus stopping the machine. It is again started by the operator through the belt shifter lever, the same being preferably operated by him with his leg through the yoke G⁸ on the belt shifter lever. The belt shifter lever is thus preferably operated by the leg as this leaves the operator's two hands free for holding and entering the sack mouth between the sack holding chains D D. If the operator has a sack ready for entering its mouth between the sack holding chains D D, it will be found often unnecessary to stop the sack holding chains D D for entering the sack between them, and in such case he leaves the belt shifter lever G⁶ in such position that its depending arm G¹³ is out of the path of the projection d¹⁵ on the chain D or else, if that is necessary moves the belt shifter lever by means of the yoke so that the projection d¹⁵ on the chain D will not strike or operate the belt shifter lever to stop the machine.

H is the tread or chain feed or take up and holding device, the same preferably consisting of a pulley operating in conjunction with a spring supporting clamp H¹ having springs h to give a yielding pressure to the clamp H¹ against the feed or take up roller H. The feed or take up roller H has a shaft h¹ furnished with a ratchet h² which is operated by pawls h³ having spring h⁴ and carried on a lever h⁵ and connected by a link h⁶ with an eccentric h⁸ on one of the shafts h⁷ of the sewing mechanism.

K K¹ is the thread or chain cutter, the same preferably consisting of a pair of knives, one or both of which is moved or reciprocated in respect to the other to sever the thread or chain of stitching after each sack is sewed and after the sewing of the next succeeding sack begins by means of springs K² operating against the movable knife slides K³ which carry pins F² having rollers F³ which engage sack holding links or clamp plates of one of the sack holding chains D, and thus retracting the knife slide during the sewing operation and permitting the spring to actuate the knife slide after the sewing operation is completed as before stated.

We claim:—

1. In a filled sack sewing machine, the combination with a sewing mechanism, of a pair of endless traveling sack holder chains adapted to receive, clamp and hold the mouth edges of a sack between them, and a

movable starting device for the sewing mechanism intermittently actuated by the chain, substantially as specified.

2. In a filled sack sewing machine, the combination with a sewing mechanism, a device for controlling the operation of the sewing mechanism, and a pair of opposing endless traveling sack holder chains, one of said chains having at certain portions thereof only a device engaging said controlling device, substantially as specified.

3. The combination with a sewing mechanism, of a device for automatically intermittently controlling the operation of the sewing mechanism, and a pair of opposing endless sack holder chains portions only of which engage said controlling device, substantially as specified.

4. The combination with a sewing mechanism, of opposing endless traveling sack holder chains, one of said chains having a gage for the front edge of the sack, and means carried by one of these chains for automatically stopping the chains substantially as specified.

5. In a filled sack sewing machine, the combination with a sewing mechanism, of a pair of endless opposing sack holding chains, provided with a series of removable sack holding clamp members to adapt the machine for operation upon sacks of different sizes or widths, substantially as specified.

6. The combination with a sewing mechanism, of opposing endless flexible sack holder chains having links furnished with removable sack holding clamp members or plates, substantially as specified.

7. The combination with a sewing mechanism, of a pair of opposing endless flexible sack holding chains furnished with a plurality of sets or series of removable sack holding clamp members or plates to adapt the chains for holding sacks of different widths, substantially as specified.

8. The combination with a sewing mechanism, of a pair of opposing endless flexible sack holding chains furnished with a plurality of sets or series of removable sack holding clamp members to adapt the chains for holding sacks of different widths, each set or series of said clamp member having a gage or stop arm for the front edge of the sack at the front end of the set or series, substantially as specified.

9. The combination with a sewing mechanism, of a pair of opposing endless flexible sack holding chains furnished with a plurality of sets or series of removable sack holding clamp members to adapt the chains for holding sacks of different widths, each set or series of said clamp members having a gage or stop arm for the front edge of the sack at the front end of the set or series, a controlling device for the sewing mechanism, the front sack holding clamp or plate

of each set or series having a cam for operating the sewing mechanism controlling device, substantially as specified.

10. The combination with a sewing mechanism, of a pair of opposed endless flexible sack holder chains intermittently operated, means for automatically stopping the chains and a yielding guide for one of said chains to cause said chains to clamp and hold the mouth edges of the sack with a yielding pressure, substantially as specified.

11. In a filled sack sewing machine, the combination with a sewing mechanism, of a pair of intermittently movable opposing endless flexible sack holder chains, and means for automatically stopping the chains, substantially as specified.

12. In a filled sack sewing machine, the combination with a sewing mechanism, of a pair of intermittently movable opposing endless flexible sack holder chains, one of said chains having a gage for the front edge of the sack, and means for automatically stopping the chains, substantially as specified.

13. In a filled sack sewing machine, the combination with a sewing mechanism, of a pair of intermittently movable opposing endless flexible sack holder chains, one of said chains having a gage for the front edge of the sack, and means for stopping and starting said sack holder chains in sack receiving position, substantially as specified.

14. The combination with a sewing mechanism, of a pair of opposing endless flexible sack holder chains, each furnished with a plurality of sets or series of sack clamping links and removable plates to adapt the machine for operation on bags of different widths, substantially as specified.

15. The combination with a sewing mechanism, of a pair of opposing endless flexible sack holder chains, each furnished with a plurality of sets or series of sack clamping links and removable plates separated by plain links, substantially as specified.

16. The combination with a sewing mechanism, of a pair of opposing endless flexible sack holder chains, each furnished with a plurality of sets or series of sack clamping links and plates, one of the chains having at the front of each of said sets or series a gage for the front edge of the sack, said gages being spaced apart more than the length of a single link, substantially as specified.

17. The combination with a sewing mechanism, of a pair of opposing endless flexible sack holder chains, each furnished with a plurality of sets or series of sack clamping links and plates, one of the chains having at the front of each of said sets or series a gage for the front edge of the sack, a controlling device for the sewing mechanism, each of said sets or series having at the front thereof means for actuating said

sewing mechanism controlling device intermittently, substantially as specified.

18. In a filled sack sewing machine, the combination with a sewing mechanism, a controlling device therefor, a pair of opposing endless flexible sack holder chains provided with a series of clamping devices throughout portions of their length only for the mouth edges of the sack, said series of clamping devices engaging said sewing mechanism controlling device to start the sewing mechanism as each sack is presented thereto, and keep the sewing mechanism in operation until the series of sack clamping links have passed the sewing mechanism, substantially as specified.

19. In a filled sack sewing machine, the combination with a sewing mechanism, of a pair of opposing endless flexible sack holding chains, and means for intermittently operating said chains, said means comprising mechanism for automatically stopping the chains, substantially as specified.

20. In a filled sack sewing machine, the combination with a sewing mechanism, of a pair of opposing endless flexible sack holding chains, and means for intermittently operating said chains, said means comprising mechanism for automatically stopping the chains, said chains each having a plurality of sets of sack holding links, substantially as specified.

21. In a filled sack sewing machine, the combination with a sewing mechanism, of a pair of opposing endless flexible sack holding chains, and means for intermittently operating said chains, said chains each having a plurality of sets of sack holding links provided with removable sack clamping plates, substantially as specified.

22. In a filled sack sewing machine, the combination with a sewing mechanism, of a pair of opposing endless flexible sack holding chains, and means for intermittently operating said chains, said chains each having a plurality of sets of sack holding links provided with removable sack clamping plates, each set having a gage for the front edge of the sack mouth, substantially as specified.

23. In a filled sack sewing machine, the combination with a sewing mechanism, of a pair of opposing endless flexible sack holding chains, and means for intermittently operating said chains, said chains each having a plurality of sets of sack holding links provided with removable sack clamping plates, and a controlling device for the sewing mechanism, substantially as specified.

24. In a filled sack sewing machine, the combination with a sewing mechanism, of a pair of opposing endless flexible sack holding chains, and means for intermittently operating said chains, said chains each having a plurality of sets of sack holding links provided with removable sack clamping plates,

a controlling device for the sewing mechanism, and means for actuating said controlling device from and by each set of sack holding links as it passes, substantially as specified.

25. In a filled sack sewing machine, the combination with a sewing mechanism, of a pair of opposing endless flexible sack holding chains, an endless flexible sack conveyer, a power shaft, connecting mechanism for operating the sewing mechanism from said power shaft, connecting mechanism for operating said endless flexible sack holding chains from the power shaft, connecting mechanism for operating the sack conveyer from the power shaft and connecting mechanism for raising and positively lowering the sack conveyer from the power shaft, substantially as specified.

26. In a filled sack sewing machine, the combination with a sewing mechanism, of a pair of opposing endless flexible sack holding chains, an endless flexible sack conveyer, a power shaft, connecting mechanism for operating the sewing mechanism from said power shaft, connecting mechanism for operating said endless flexible sack holding chains from the power shaft, connecting mechanism for operating the sack conveyer from the power shaft and connecting mechanism for raising and positively lowering the sack conveyer from the power shaft and a controlling device for the sewing mechanism, substantially as specified.

27. In a filled sack sewing machine, the combination with a sewing mechanism, of a pair of opposing endless flexible sack holding chains, an endless flexible sack conveyer, a power shaft, connecting mechanism for operating the sewing mechanism from said power shaft, connecting mechanism for operating said endless flexible sack holding chains from the power shaft, connecting mechanism for operating the sack conveyer from the power shaft, connecting mechanism for raising and positively lowering the sack conveyer from the power shaft and means for engaging and disengaging the sack conveyer raising and lowering mechanism, substantially as specified.

28. In a filled sack sewing machine, the combination with a sewing mechanism, of a pair of opposing endless flexible sack holding chains, an endless flexible sack conveyer, a power shaft, connecting mechanism for operating the sewing mechanism from said power shaft, connecting mechanism for operating said endless flexible sack holding chains from the power shaft, connecting mechanism for operating the sack conveyer from the power shaft and connecting mechanism for raising and lowering the sack conveyer from the power shaft, and a controlling device for the sewing mechanism, one of said sack holder chains having means

for actuating said sewing mechanism controlling device, substantially as specified.

29. The combination with a sewing mechanism, of a pair of opposing endless flexible sack holder chains, means for intermittently driving said chains, an endless flexible sack conveyer, propelling mechanism therefor, raising and lowering mechanism adapted to be positively operated in both directions and means for engaging and disengaging said raising and lowering mechanism with a power shaft, substantially as specified.

30. The combination with a sewing mechanism, of opposing endless flexible sack holder chains, a power shaft and connecting mechanism for operating said sack holder chains having a disconnecting means, one of said sack holder chains having a device for operating said disconnecting means to stop the sack holder chains, substantially as specified.

31. The combination with a sewing mechanism, of opposing endless flexible sack holder chains, one of said chains having a gage for the front end of the sack, means for propelling the chains and means for stopping and starting the chains at the sack receiving position, substantially as specified.

32. The combination with a sewing mechanism, of opposing endless traveling sack holder chains, a power shaft and means for automatically operating the chains from the power shaft, means for stopping and starting the chains at the sack receiving position, substantially as specified.

33. In a filled sack sewing machine, the combination with a sewing mechanism, of an endless flexible sack conveyer, a power shaft, means for propelling said conveyer from said power shaft, means for raising and positively lowering said conveyer from the power shaft provided with a disconnecting device and a pair of opposing endless flexible sack holder chains, substantially as specified.

34. In a filled sack sewing machine, the combination with a power shaft, of a sewing mechanism automatically intermittently operated, an endless traveling sack conveyer, raising and lowering mechanism for the sack conveyer, propelling mechanism for the sack conveyer, a pair of opposing endless flexible sack holder chains, means for propelling said chains, substantially as specified.

35. In a filled sack sewing machine, the combination with a power shaft, of a sewing mechanism, an endless traveling sack conveyer, raising and lowering mechanism for the sack conveyer adapted to positively lower the sack conveyer, propelling mechanism for the sack conveyer, a pair of opposing endless flexible sack holder chains, means for propelling said chains, and means for connecting and disconnecting said

conveyer raising and lowering mechanism with the power shaft, substantially as specified.

36. In a filled sack sewing machine, the combination with a power shaft, of a sewing mechanism, an endless traveling sack conveyer, raising and lowering mechanism for the sack conveyer, propelling mechanism for the sack conveyer, a pair of opposing endless flexible sack holder chains, means for propelling said chains, means for connecting and disconnecting said conveyer raising and lowering mechanism with the power shaft, means for propelling said sack holder chains and means for stopping and starting the sack holder chains at the sack receiving position, substantially as specified.

37. In a filled sack sewing machine, the combination with a power shaft, of a sewing mechanism, an endless traveling sack conveyer, raising and lowering mechanism for the sack conveyer, propelling mechanism for the sack conveyer, a pair of opposing endless flexible sack holder chains, means for propelling said chains, means for connecting and disconnecting said conveyer raising and lowering mechanism with the power shaft, means for propelling said sack holder chains and means for stopping and starting the sack holder chains at the sack receiving position, one of said sack holder chains having a gage for the front edge of the sack, substantially as specified.

38. The combination with a sewing mechanism, of a pair of opposing endless flexible sack holder chains, each furnished with a plurality of sets of sack clamping links, means for propelling the sack holder chains and means for automatically stopping the sack holder chains in position for receiving a sack mouth between the opposing sack clamping links of the chains, substantially as specified.

39. The combination with a sewing mechanism, of a pair of opposing endless flexible sack holder chains, each furnished with a plurality of sets of sack clamping links, means for propelling the sack holder chains, means for automatically stopping the sack holder chains in position for receiving a sack mouth between the opposing sack clamping links of the chains, and a sack conveyer, substantially as specified.

40. The combination with a sewing mechanism, of a pair of opposing endless flexible sack holder chains, each furnished with a plurality of sets of sack clamping links, means for propelling the sack holder chains, means for automatically stopping the sack holder chains in position for receiving a sack mouth between the opposing sack clamping links of the chains, an endless flexible sack conveyer, means for propelling said sack conveyer and means for automati-

cally raising and lowering said sack conveyer, substantially as specified.

41. The combination with a sewing mechanism, of a pair of opposing endless flexible sack holder chains, each furnished with a plurality of sets of sack clamping links, means for propelling the sack holder chains, means for automatically stopping the sack holder chains in position for receiving a sack mouth between the opposing sack clamping links of the chains, an endless flexible sack conveyer, means for propelling said sack conveyer, means for automatically raising and lowering said sack conveyer and a thread chain take up and holding device, substantially as specified.

42. The combination with a sewing mechanism, of a pair of opposing endless flexible sack holder chains, each furnished with a plurality of sets of sack clamping links, means for propelling the sack holder chains, means for automatically stopping the sack holder chains in position for receiving a sack mouth between the opposing sack clamping links of the chains, an endless flexible sack conveyer, means for propelling said sack conveyer, means for automatically raising and lowering said sack conveyer, a thread chain take up and holding device and a thread chain cutting device, substantially as specified.

43. The combination with a sewing mechanism, of a pair of opposing endless flexible sack holder chains, each furnished with a plurality of sets of sack clamping links, means for propelling the sack holder chains, means for automatically stopping the sack holder chains in position for receiving a sack mouth between the opposing sack clamping links of the chains and a thread chain take up and holding device, substantially as specified.

44. The combination with a sewing mechanism, of a pair of opposing endless flexible sack holder chains, each furnished with a plurality of sets of sack clamping links, means for propelling the sack holder chains, means for automatically stopping the sack holder chains in position for receiving a sack mouth between the opposing sack clamping links of the chains, a thread chain take up and holding device and a thread chain cutting device, substantially as specified.

45. The combination with a sewing mechanism, of a device for controlling the operation of the sewing mechanism, a pair of opposing endless sack holder chains engaging said controlling device, a thread chain cutting device and means on the sack holder chain for operating the thread chain cutting device, substantially as specified.

46. The combination with a sewing mechanism, of a device for controlling the operation of the sewing mechanism, a pair

of opposing endless sack holder chains provided with a plurality of sets of clamping plates engaging said controlling device, a thread chain cutting device and means on one of the clamping plates for controlling the operation of said thread chain cutting device, substantially as specified.

47. The combination with a sewing mechanism, of a device for controlling the operation of the sewing mechanism, a pair of opposing endless sack holder chains engaging said controlling device, a thread chain cutting device having a pin adapted to be engaged by one of said sack holder chains for controlling the operation thereof, substantially as specified.

48. In a filled sack sewing machine, the combination with a sewing mechanism, of a pair of endless traveling sack holder chains provided with a plurality of sets of clamping plates adapted to receive, clamp and hold the mouth edges of a sack between them, a movable starting device for the sewing mechanism actuated thereby, a thread chain take up and holding device, a thread chain cutter and means on one of the clamping plates for controlling the operation of said thread chain cutter, substantially as specified.

49. In a filled sack sewing machine, the combination with a sewing mechanism, a device for controlling the operation of the sewing mechanism, a pair of opposing endless traveling sack holder chains, one of said chains having a device engaging said controlling device, a thread chain take up and holding device, a thread chain cutter and means for controlling the operation of said thread chain cutter by one of said sack holder chains, substantially as specified.

50. The combination with a sewing mechanism, of a device for controlling the operation of the sewing mechanism, a pair of opposing endless sack holder chains engaging said controlling device, a thread chain take up and holding device, a thread chain cutter and means for controlling the operation of said thread chain cutter by one of said sack holder chains, substantially as specified.

51. The combination with a sewing mechanism, of opposing endless traveling sack holder chains, one of said chains having a gage for the front edge of the sack, a thread chain take up and holding device, a thread chain cutter and means for controlling the operation of said thread chain cutter by one of said sack holder chains, substantially as specified.

52. In a filled sack sewing machine, the combination with a sewing mechanism, of a pair of endless opposing sack holding chains, provided with a series of removable sack holding clamp members to adapt the machine for operation upon sacks of different

sizes or widths, a thread chain take up and holding device, a thread chain cutter, and means for controlling the operation of said thread chain cutter by one of said sack holder chains, substantially as specified.

53. The combination with a sewing mechanism, of opposing endless flexible sack holder chains having links furnished with removable sack holding clamp members or plates, a thread chain take up and holding device, a thread chain cutter and means for controlling the operation of said thread chain cutter by one of said sack holder chains, substantially as specified.

54. The combination with a sewing mechanism, of a pair of opposing endless flexible sack holding chains furnished with a plurality of sets or series of removable sack holding clamp members or plates to adapt the chains for holding sacks of different widths, a thread chain take up and holding device, a thread chain cutter and means for controlling the operation of said thread chain cutter by one of said sack holder chains, substantially as specified.

55. The combination with a sewing mechanism, of a pair of opposing endless flexible sack holding chains furnished with a plurality of sets or series of removable sack holding clamp members or plates to adapt the chains for holding sacks of different widths, each set or series of said clamp members or plates having a gage or stop arm for the front edge of the sack at the front end of the set or series, a thread chain take up and holding device, a thread chain cutter and means for controlling the operation of said thread chain cutter by one of said sack holder chains, substantially as specified.

56. In a filled sack sewing machine, the combination with a sewing mechanism, of a pair of opposing endless sack holder chains, a vertically adjustable and horizontally movable endless flexible sack conveyer, means for raising and positively lowering the sack conveyer, means for propelling the sack conveyer, a driving shaft and means for connecting and disconnecting the driving shaft with said conveyer raising and lowering mechanism, substantially as specified.

57. In a filled sack sewing machine, the combination with a sewing mechanism, of a pair of opposing endless sack holder chains, an endless flexible sack conveyer, mechanism for propelling said conveyer and mechanism for automatically raising and positively lowering the conveyer, substantially as specified.

58. In a filled sack sewing machine, the combination with a sewing mechanism, of a pair of opposing endless sack holder chains, an endless flexible sack conveyer, mechanism for propelling said conveyer, mecha-

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nism for automatically raising and positively lowering the conveyer, a power shaft and means for connecting and disconnecting said power shaft with the raising and positively lowering mechanism of said sack conveyer, substantially as specified.

59. In a filled sack sewing machine, the combination with a sack sewing mechanism, of a pair of opposing endless sack holder chains, a sack conveyer, a power shaft, connecting mechanism for propelling the sack conveyer from the power shaft and connecting mechanism for raising and positively lowering the conveyer from the power shaft, substantially as specified.

60. In a filled sack sewing machine, the combination with a sack sewing mechanism, of a pair of opposing endless sack holder chains, a sack conveyer, a power shaft, connecting mechanism for propelling the sack conveyer from the power shaft, and connecting mechanism for raising and lowering the conveyer from the power shaft provided with a connecting clutch for throwing said raising and lowering mechanism in and out of operation, substantially as specified.

61. In a filled sack sewing machine, the combination with a sewing mechanism, of a pair of opposing endless sack holder chains, an endless flexible sack conveyer, a lifting screw for raising and lowering said conveyer, a power shaft and connecting gearing between the power shaft and lifting screw for operating the lifting screw from the power shaft, substantially as specified.

62. In a filled sack sewing machine, the combination with a sewing mechanism, of a pair of opposing endless sack holder chains, an endless flexible sack conveyer, a lifting screw for raising and lowering said conveyer, a power shaft and connecting gearing between the power shaft and lifting screw for operating the lifting screw from the power shaft, said connecting gearing between the power shaft and lifting screw having means for turning the lifting screw in either direction as required to raise or lower the conveyer, substantially as specified.

63. In a filled sack sewing machine, the combination with a sewing mechanism, of a pair of opposing endless sack holder chains, an endless flexible sack conveyer, a lifting screw for raising and lowering said conveyer, a power shaft, and connecting gearing between the power shaft and lifting screw for operating the lifting screw from the power shaft, said connecting gearing comprising a friction gear and two movable friction gears, one or the other of which is adapted to be moved into engagement with said first mentioned friction gear according as it is desired to raise or lower the conveyer, substantially as specified.

GEORGE E. SCOTT.
EDWARD D. SCOTT.

Witnesses:

H. M. MUNDAY,
PEARL ABRAMS.