P. F. VOGEL.

MACHINE FOR UNRAVELING TEXTILE FABRICS.

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900,451.

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Fig. 1

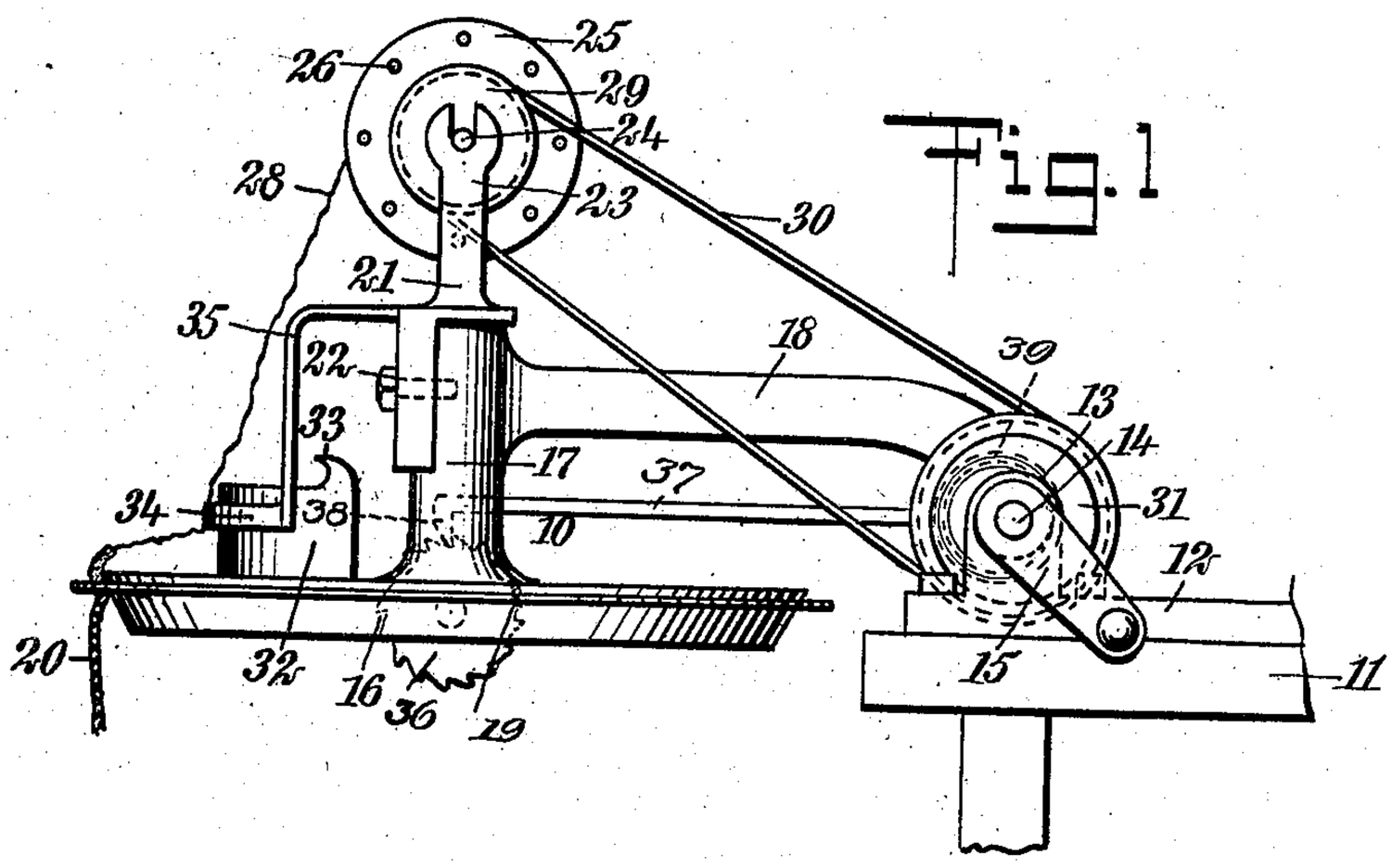

Fig. 2

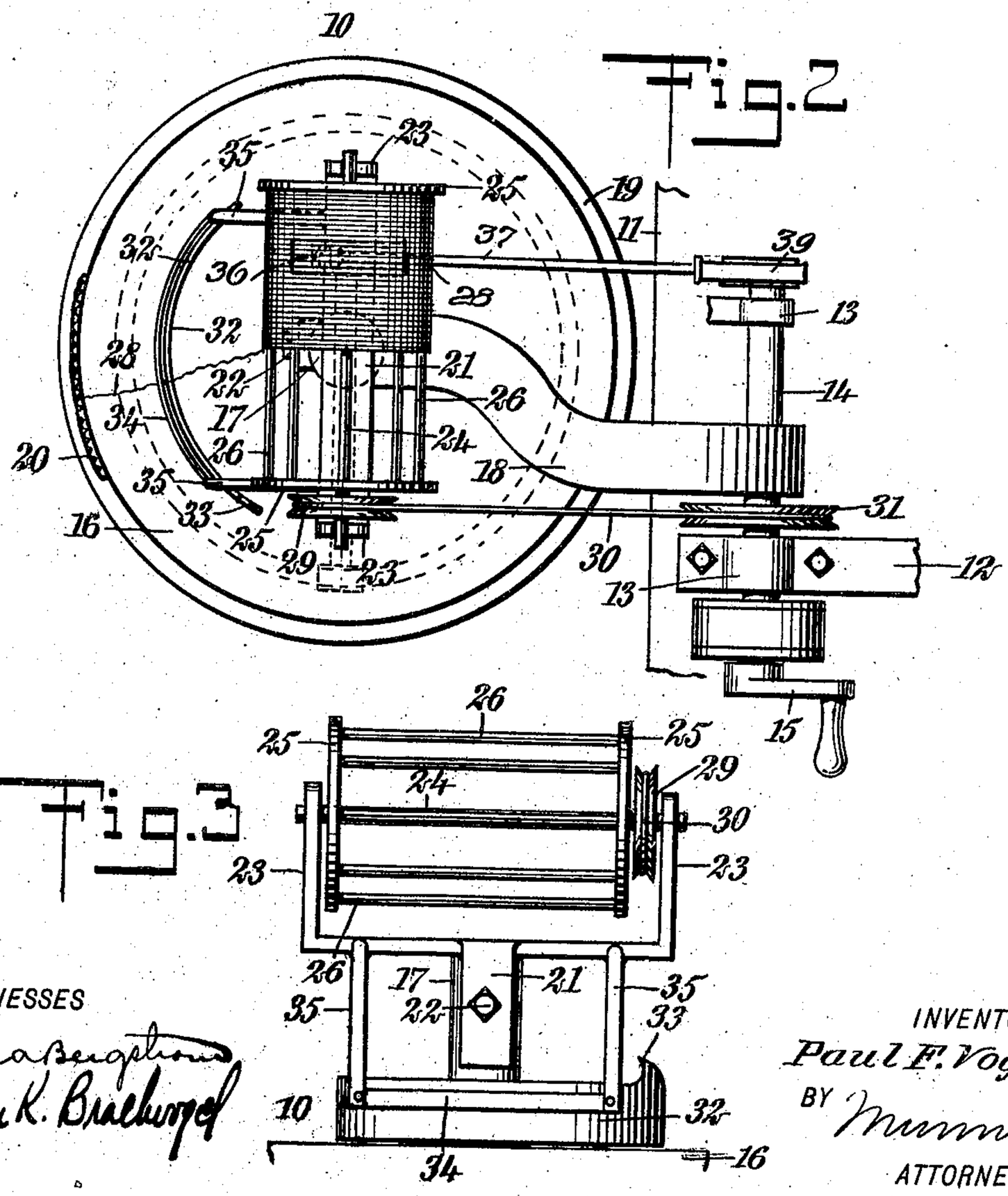

Fig. 3

WITNESSES

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MACHINE FOR UNRAVELING TEXTILE FABRICS.

No. 900,451. Specification of Letters Patent. Patented Oct. 6, 1908.

Application filed January 22, 1908. Serial No. 412,144.

To all whom it may concern:

Be it known that I, PAUL F. VOGEL, a citizen of the United States, and a resident of Clinton, in the county of Anderson and State of Tennessee, have invented a new and Improved Machine for Unraveling Textile Fabrics, of which the following is a full, clear, and exact description.

This invention relates to machines for unraveling textile fabrics, and more particularly to machines used in combination with loopers, and serving for unraveling the selvage edges of knitted hosiery.

An object of the invention is to provide a simple, inexpensive and efficient mechanism to be used in combination with loopers which join together edges of knit goods, and serving to unravel the selvage edges of such goods and to wind the unraveled yarn upon a reel.

A further object of the invention is to provide a device of the class described adapted to be mounted upon a looper and to be operated by the driving mechanism of the looper.

A still further object of the invention is to provide, in combination with a looper having means for holding the fabric, a reel, means for operatively connecting the reel with the driving mechanism of the looper to operate the reel, and means upon the looper for guiding the yarn to be unraveled, from the fabric on to the reel.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which

Figure 1 is a side elevation of a looper having my invention applied thereto; Fig. 2 is a plan view of the looper with the unraveling machine; and Fig. 3 is a front elevation showing the reel and the guiding mechanism of the unraveling machine.

Before proceeding to a more detailed explanation of my invention, it should be understood that the same is particularly useful with loopers. Loopers are those machines which are employed to join edges of knit goods. For example, in hosiery, knit or woven, it is customary, in manufacturing seamless stockings, to leave a gap or opening across the toe. The looper is used for closing this gap, or for any other work in knit goods manufacture where two edges are to be joined together. The edges do not always meet exactly, and it is therefore necessary to unravel part of one or the other, when the fabric is in the looper. Often, the yarn unraveled from the fabric in this way is wasted, and as the unraveling is generally performed by hand, it is a tedious operation which involves considerable loss of time. My invention is for the purpose of automatically unraveling these superfluous or selvage edges of the fabric, while the same is on the looper and is being operated upon thereby. I provide common means for driving the looper and the unraveling mechanism; that is, the latter is actuated directly from the driving mechanism of the looper.

Referring more particularly to the drawings, 10 represents a looper, which may be of any preferred or common type. The looper is mounted in any convenient manner upon a support 11, and has holding members 12 provided with bearings 13 which carry a driving shaft 14. The latter has a hand crank 15 by means of which it can be operated, or it can be driven in any other suitable manner. The looper comprises a needle blade 16, which is preferably in the form of a disk having its periphery outwardly beveled and containing the needles and operating mechanism (not shown). The needle blade 16 has a substantially central hub 17 which is mounted upon a supporting arm 18. An annular clamping member or ring 19 is arranged at the periphery of the needle blade, and serves to clamp the stocking 20 or other fabric in position, to permit the needles of the looper to operate thereupon. A looper operating ratchet wheel 36 is carried by the blade 16 and is actuated by an arm 37 having a finger 38 constituting a ratchet dog and engaging the wheel 36. The arm 37 is actuated by an eccentric 39 upon the shaft 14.

A frame 21 is arranged upon the hub 17, and is secured in position thereupon by means of a screw or bolt 22, or in any other suitable manner. The frame 21 has upwardly disposed arms 23, forming bearings in which is journaled the reel shaft 24. The latter has sides 25 joined by the reel bars 26, upon which the yarn 28, unraveled from the fabric 20 is wound. At one side of the reel, the shaft 24 has a rigid pulley 29, connected by means of a belt 30 with a pulley 31 rigidly

mounted upon the shaft 14. The shaft 14, it will be understood, is the driving shaft which operates the mechanism of the looper.

A curved guide plate 32 is mounted upon the upper face of the needle plate 16, and at one end is formed into a knife 33 for severing the yarn when the fabric has been sufficiently unraveled. A correspondingly curved guide bar 34 is arranged at the forward side of the guide plate and is separated slightly therefrom. The guide bar is held in position by means of supporting arms 35 extending from the frame 21.

The stocking or other fabric 20 is clamped in position upon the looper by means of the ring 19, the edges to be joined being properly positioned for the purpose. By turning the hand crank 15 or by driving the shaft 14 in some other manner, the looper is operated to join the edges of the fabric and at the same time to unravel the selvage and wind the yarn therefrom upon the reel. It is of course, first necessary to start the unraveling and secure the end of the yarn to the reel, the guide plate 32 and the guide bar 34 serving to guide the yarn as it is wound upon the reel, being suitably curved to facilitate the even disposal and the smooth unraveling of the yarn.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent:

1. The combination, with a looper, of means for holding the fabric to be worked upon by the looper, means for unraveling the selvage of the fabric, and means for simultaneously operating said looper and said unraveling means, said looper having means for guiding the yarn from the fabric to said unraveling means.

2. In combination, a looper, a reel, means for holding a fabric upon said looper, means for guiding yarn from the fabric to said reel, and means for simultaneously operating said looper and said reel.

3. In combination, a looper having a needle blade and a hub, a frame mounted upon said hub, a reel carried by said frame, and means for simultaneously operating said looper and said reel, said needle blade having a guide plate, and said frame having a guide bar adapted to coöperate with said guide plate to direct yarn from the fabric to said reel.

4. In combination, means for holding a fabric, a reel, means for operating said reel, and means for guiding yarn from the fabric to said reel, said guiding means including means for severing the yarn.

5. In combination, means for holding a fabric, a frame, a reel rotatably mounted upon said frame, a guide plate having a part constituting a knife, said frame having arms, a guide bar carried by said arms and arranged adjacent to said guide plate, said guide plate and said guide bar serving to direct the yarn from the fabric to said reel, and means for driving said reel.

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

PAUL F. VOGEL.

Witnesses:
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E. L. YOUNG.