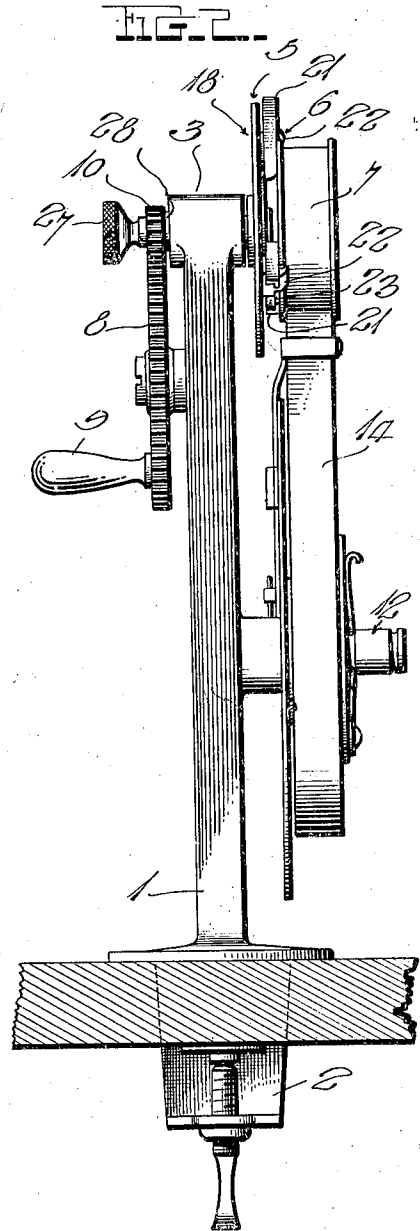
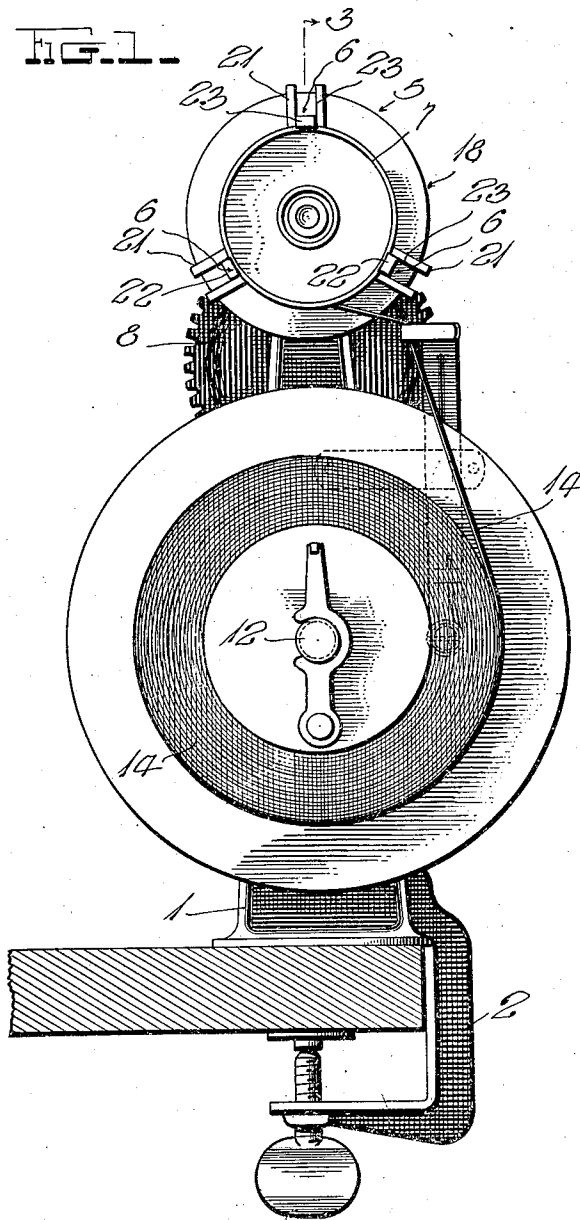


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CHUCK FOR RIBBON WINDING MACHINES.
APPLICATION FILED MAY 14, 1919.

1,352,376.

Patented Sept. 7, 1920.
2 SHEETS—SHEET 1.



Inventor

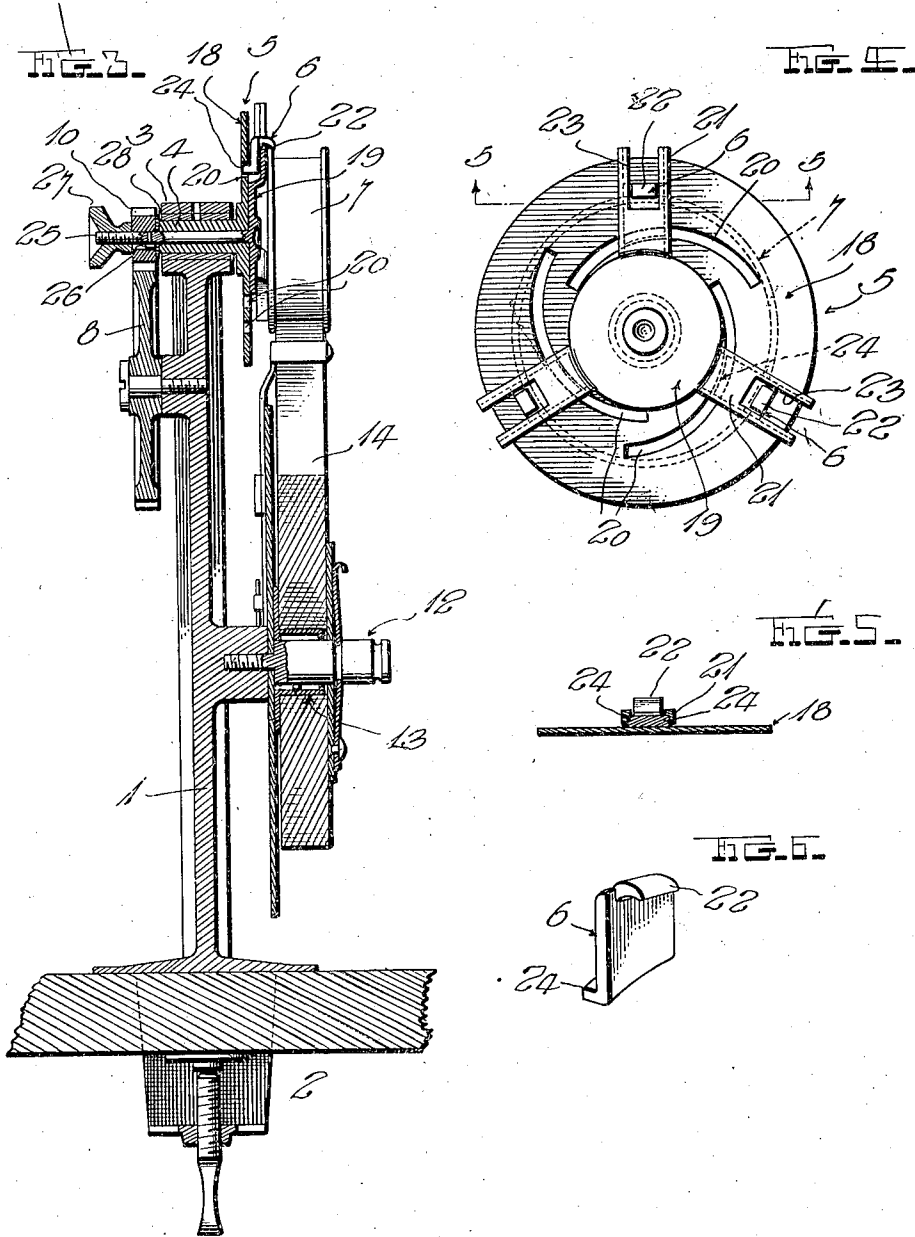
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UNITED STATES PATENT OFFICE.

EDGAR A. OPPENHEIMER, OF CHICAGO, ILLINOIS.

CHUCK FOR RIBBON-WINDING MACHINES.

1,352,376.

Specification of Letters Patent.

Patented Sept. 7, 1920.

Application filed May 14, 1919. Serial No. 297,034.

To all whom it may concern:

Be it known that I, EDGAR A. OPPENHEIMER, citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Chucks for Ribbon-Winding Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to chucks and more particularly to one well adapted for winding and unwinding devices or machines, such as those used for handling inked ribbons for typewriters, adding machines, cash registers and the like.

It is the primary object of my invention to provide a simple and practical chuck for ribbon winding devices which will enable the users of typewriting machines, adding machines and the like to purchase inked ribbons on large reels and to quickly and easily grip previously used spools and wind new ribbon thereon, thereby saving the expense of the new spools and their individual shipping containers.

Another object of my invention is to provide an easily manipulated spool holding and rotating chuck which will hold substantially any of the spools now in common use upon the numerous makes of typewriters, adding machines, etc.

With the foregoing and other objects in view, the invention resides in the novel constructions, combinations and arrangements of parts hereinafter described and claimed, and illustrated in the accompanying drawings, in which:

Figure 1 is a side elevation of a ribbon winding device embodying my invention.

Fig. 2 is an edge view.

Fig. 3 is a vertical section on the plane indicated by the line 3—3 of Fig. 1.

Fig. 4 is an enlarged elevation of the spool rotating head.

Fig. 5 is a detail section on line 5—5 of Fig. 4.

Fig. 6 is a perspective view of one of the spool gripping jaws.

In the drawings above briefly described, the numeral 1 designates a vertical standard preferably having a clamp 2 on its lower end for mounting it on a table, desk, counter or the like, the upper end of said standard 1 being provided with a bearing 3 in which

a shaft 4 is rotatably mounted, said shaft having on one end a head 5 provided with jaws 6 adapted to grip one flange of a common form of ribbon spool 7. A gear 8 having a handle 9, and a pinion 10 are shown for rotating the shaft 4 but any other preferred means could well be employed.

I have shown on the standard 1 a stub shaft 12 upon which a reel 13 is rotatably mounted, said reel carrying sufficient ribbon to rewind several old spools for typewriters, adding machines and the like.

The head 5 in which resides the gist of the invention, includes two sections 18 and 19, said section 18 being in the form of a disk integral with or otherwise carried by one end of the shaft 4, said disk being provided with a plurality of spirally directed slots 20. The section 19 is also of disk shape and is stamped at its peripheral portion to provide radiating channel shaped arms 21 in which the jaws 6 are slidably mounted. These jaws are by preference of stamped metal formation and are provided with claws 22 extending through slots 23 in the arms 21 for gripping the spool flange. The inner ends of the jaws 6 are provided with flanges or the like 24 which are received in the slots 20 and it will thus be seen that by relatively turning the two sections 18 and 19, the jaws may be moved to either released or gripping position, and when said jaws are in the last named position, the two disks are frictionally clamped together to prevent release of said jaws until required. To clamp the two sections of the head together, I provide the section 19 with a stem 25, preferably formed integrally therewith, said stem passing rotatably through the center of the shaft 4 and projecting beyond said shaft as shown clearly in Fig. 3. The pinion 10 is mounted on the projecting end of the stem 25 and is connected thereto by a key 26 operating in a suitable keyway. A thumb nut 27 is threaded on the stem 25 and when said nut is tightened, the pinion 10 is clamped against one end of the shaft 4 and at the same time the two disks 18 and 19 are clamped together against relative turning. Preferably, though not necessarily, a washer 28 is interposed between the shaft 4 and the pinion 10.

In operation an empty spool is placed in the clutch device after the nut 27 has been loosened and the disks 18—19 turned to open the jaws 6. The flange of the spool is placed

against the arms 21 and held by one hand which also engages either the periphery of the disk 18 or the projecting ends of the arms 21, the other being gripped with the other hand of the operator and the two disks may then be readily turned to cause the eccentric slots 20 to move the jaws 6 inwardly into gripping engagement with the peripheral edge of the spool flange. The nut 27 is then tightened to bind the disks 18—19 into frictional contact to hold the jaws 6 in their engaged positions. The end of the ribbon, it will of course be understood, is fastened to the ribbon spool to be wound by the usual devices which come on such spools. By turning the handle 9 in the proper direction it will be seen that the typewriter spool may be quickly turned until the desired quantity of ribbon is wound upon it. The ribbon is then cut and the spool removed from the winding device and applied to the typewriter or other machine.

From the foregoing, taken in connection with the accompanying drawings, it will be seen that I have provided a comparatively simple and inexpensive, yet a highly efficient and reliable device for carrying out the objects of the invention, and since probably the best results are obtainable from the details disclosed, they may well be followed. I wish it understood however that within the scope of the invention as claimed, numerous minor changes may well be made.

I claim:

1. In a chuck device, a bearing, a rotatable shaft mounted in said bearing, a head on one end of said shaft, consisting of two relatively movable sections, jaws carried by said head for gripping the flange of a ribbon spool, means for moving said jaws to gripping and releasing positions by proper relative shifting of said head sections, means for drawing one of said head sections laterally against the other to frictionally lock them against relative movement when said jaws are in gripping position, and means for rotating the aforesaid shaft.

2. In a chuck device, a bearing, a rotatable shaft mounted in said bearing, a head on one end of said shaft, consisting of two relatively movable sections, jaws carried by said head for gripping the flange of a ribbon spool, means for moving said jaws to gripping and releasing positions by proper relative shifting of said head sections, means passing through said shaft for drawing one of said head sections laterally against the other to frictionally lock them against relative turning when in gripping position, and means for rotating said shaft.

3. In a chuck device, a bearing, a rotatable shaft mounted in said bearing, a head on one end of said shaft, consisting of two

relatively movable sections, jaws carried by said head for gripping the flange of a ribbon spool, means for moving said jaws to gripping and releasing positions by proper relative shifting of said head sections, a stem extending from one section of said head through said shaft, a nut threaded on said stem for clamping said head sections against each other to prevent relative turning when said jaws are in gripping position, and means for rotating said shaft.

4. In a chuck device, a bearing, a rotatable shaft mounted in said bearing, a head on one end of said shaft, consisting of two relatively rotatable sections, jaws carried by said head for gripping the flange of a ribbon spool, means for moving said jaws to gripping and releasing positions by proper relative turning of said head sections, a stem extending from one section of said head through said shaft, a nut threaded on said stem for clamping said head sections against relative turning when said jaws are in gripping position, and a driving member for said shaft slidably keyed on said stem between said nut and the adjacent end of said shaft.

5. In a chuck device, a rotatably mounted shaft, a disk carried by one end of said shaft and having spirally directed slots, a second disk contacting with the outer side of said first named disk and provided with radial guides having slots, jaws slidable in said guides and having claws extending through said last named slots to grip a ribbon spool flange, said jaws also having projections received in said spirally directed slots, whereby relative turning of the two disks will move said jaws as required, means for drawing one of said disks laterally against the other to frictionally clamp said jaws in said guides, and means for rotating said shaft.

6. In a chuck device, a rotatably mounted shaft, a disk carried by one end of said shaft and having spirally directed slots, a second disk contacting with the outer side of said first named disk and stamped to provide radial guides having slots, jaws slidable in said guides and having claws extending through said last named slots to grip a ribbon spool flange, said jaws also having projections received in said spirally directed slots, whereby relative turning of the two disks will move said jaws as required, a stem projecting from said second named disk and passing through said shaft, a nut threaded on said stem and coacting with said shaft to clamp the two disks together, and means for rotating said shaft.

In testimony whereof I have hereunto set my hand.

EDGAR A. OPPENHEIMER.