WIRING INSTRUMENT WITH PAPER SUPPLY

Frank Marchuck, Los Angeles, and Gilbert J. Newfield,
Sun Valley, Calif. (both of 22350 Cantara St., Conoga
Park, Calif.)

Filed Nov. 28, 1958, Ser. No. 776,769
2 Claims. (Cl. 242—55.53)

This invention relates to a writing instrument with a
supply of memo paper.

An object of the present invention is to provide an
instrument of the character indicated in which the paper
supply is dispensed from a hidden position within the
instrument and is accommodated wholly within the in-
terior of the instrument.

Another object of the invention is to provide an in-
strument as above indicated in which there is provided
discharging or feeding means that is quite un-
obtrusive and yet is so located that access for easy man-
ipulation is readily effected.

A further object of the invention is to provide a wir-
ing instrument with a paper supply that may be re-
filled with easy facility upon the paper supply becoming
exhausted.

The invention also has for its objects to provide such
means that are positive in operation, convenient in use,
easily installed in a working position and easily discon-
ected therefrom, economical of manufacture, relatively
simple, and of general superiority and serviceability.

The invention also comprises novel details of construc-
tion and novel combinations and arrangements of parts
which are illustrated in the drawings and are described
in the following description. However, the drawings and
the following description merely show and the following description merely describes, preferred
embodiments of the present invention, which are given
by way of illustration or example only.

In the drawing, like reference characters designate
similar parts in the several views.

FIG. 1 is a partial elevational and partial sectional
view of a writing instrument with a paper supply ac-
cording to the present invention.

FIGS. 2 and 3 are cross-sectional views as taken on
the respective lines 2—2 and 3—3 of FIG. 1.

FIG. 4 is a fragmentary sectional view of a modifi-
cation.

The writing instrument, while shown as a ball point
pen, may be a mechanical pencil or other writing device
that may be made to have interior space. The instru-
ment that is illustrated typically has a lower shell or bar-
rel 5 that houses an ink cartridge 6 that terminates in a
writing tip 7. In some forms, said tip is fixed. The
same is here shown as of the retractable type that is
controlled by a button or projection 8 that is carried at
the end of an upper shell or barrel 9. It is usual for the
projection 8 and 9 to be separately connected so that the
cartridge 6 may be replaced when depleted. Ordinarily,
the cartridge extends for the full length of both barrels
or connected cartridge sections may so extend. In the
present case, the cartridge terminates at its upper end
below the lower end of the upper barrel 9 and a rod-like
extension 10 passes axially through said upper barrel to
connect the cartridge with the actuating means con-
trolled by button 8.

According to the present invention, a paper supply 15
is housed within the upper barrel 9, and means 16 is
provided that both connects the barrels 5 and 9 and
operates the paper supply 15.

The paper supply 15 is shown as a spool 20 that has a
core 21 through bore 21 through which extends the men-
tioned rod-like extension 10. Said spool is provided
with end flanges 22 to locate a roll of paper 23 that is wound
on the spool. In one of several different ways, the upper
barrel 9 is provided with a longitudinal slot 24 through
which the end 25 of the paper 23 may be fed. Serra-
tions or other sharp means 26 may be provided on one
edge of slot 24 and against which the paper may be
sheared, torn or otherwise severed from the supply on
the spool 20. It will be clear that the extension 10 serves
as a spindle on which the spool rotates.

The means 16 is shown in two forms. In the form
of FIG. 1, the same comprises two longitudinally spaced
sleeves 27 and 28 between which is disposed a finger ring
29 formed as an annular flange on a body 30 on which
said sleeves 27 and 28 are rotationally mounted. As-
sembly of said sleeves and body is retained by means of
flares 31 on the end of the body engaged with conical
seats 32 formed in the sleeves. It will be clear that there
may be relative rotation between the body 30 and each of
the sleeves 27 and 28.

One end of the body 30 is provided with a polygonal
seat 33 into which may extend a similarly-shaped exten-
sion 34 of the spool 20. Thus, rotation of body 30
causes rotation of the spool.

The means 16 connects the barrels 5 and 9 by pressing
or otherwise forcing the outer peripheral surfaces of
the sleeves 27 and 28 into the adjacent ends of said bar-
rels. To this end, said outer surfaces may be knurled
or otherwise roughened to insure firm frictional conec-
tion with said barrels. Such roughening is shown as
straight knurls 35.

When the above-described means 16 of FIG. 1 is as-
sembled into the writing instrument, the flap ring or
ring 29 peripherally extends beyond the outer faces of
the barrels. Thus, the fluted or grooved edge of said flange
or ring may be turned while holding the upper barrel,
thereby causing the spool to turn and paper on said
spool fed through the slot 24. Barrel 5 may or may not
turn with the body 30. The same is immaterial to a
paper-feeding operation.

The modification of FIG. 4 omits the sleeve 28, the
body 30 being enlarged to fit into and connect with the
lower barrel 5. In other respects, the construction of the
means 16 remains the same except that threads 36 are
shown, instead of knurls 35, for connecting the spool
16 and the barrels. Since feed of paper by turning the
spool may be effected by rotating or turning the two
barrels relatively, the flange 29a may be flush with the
outer faces of the barrels. Of course, the splices 35 of
FIG. 1 may be replaced by threads 36 and the threads
36 of FIG. 4 by splines 35.

Upon depletion of the paper 23, a new supply may
be provided by separating the means 16 from the upper
barrel 9. Now, the empty spool 20 may be removed
and a paper-provided spool slipped into said barrel be-
fore the latter is reassembled with the means 16.

The rod 10 allows for a large paper capacity of spool
20. By extending the cartridge 6 through the spool, its
capacity may be somewhat reduced, yet providing for an
ample paper supply.

While the foregoing specification illustrates and de-
scribes what we now contemplate to be the best modes
of carrying out our invention, the constructions are, of
course, subject to modification without departing from
the spirit and scope of our invention. Therefore, we do
not desire to restrict the invention to the particular forms
of construction illustrated and described, but desire to
cover all modifications that may fall within the scope of
the appended claims.

Having thus described our invention, what is claimed
and desired to be secured by Letters Patent is:

1. In combination, an elongated two-part barrel with
the parts on a common axis, one part constituting a hand
grasp end and the other part being interiorly hollow with

2.991,952
United States Patent Office
Patented July 11, 1961
an elongated slit opening into said hollow, means to connect the barrel parts including a manually rotational member on the axis of the barrel and having a polygonal seat directed toward the mentioned hollow, said latter means including two sleeves, one of each being fixedly connected in the adjacent ends of the barrel parts, said rotational member being provided with portions that connect said sleeves against endwise displacement and with portions in rotational bearing engagement with the sleeves whereby the manually rotational member is adapted to be rotated independently of both barrel parts, and a spool disposed in said hollow on the axis of the barrel and provided with a polygonal extension fitted into said seat, said spool being rotated upon manual manipulation of the manually rotational member, a roll of paper on said spool being adapted to be fed through said slot during such manipulation.

2. In combination, an elongated two-part barrel with the parts on a common axis, one part constituting a hand grip end and the other part being interiorly hollow with an elongated slit opening into said hollow, means to connect the barrel parts including a manually rotational member on the axis of the barrel and having a polygonal seat directed toward the mentioned hollow, said latter means including two sleeves, one of each being fixedly connected in the adjacent ends of the barrel parts, means interconnecting said rotational member and the sleeves to hold said member and sleeves against endwise displacement and the member in rotational bearing engagement with the sleeves whereby the manually rotational member is adapted to be rotated independently of both barrel parts, and a spool disposed in said hollow on the axis of the barrel and provided with a polygonal extension fitted into said seat, said spool being rotated upon manual manipulation of the manually rotational member, a roll of paper on said spool being adapted to be fed through said slot during such manipulation.

References Cited in the file of this patent

UNITED STATES PATENTS

1,266,299 Moore .................. May 14, 1918
1,359,725 Moore .................. Nov. 23, 1920
1,420,260 Henry .................. June 20, 1922
2,720,863 Rey et al. ................. Oct. 18, 1955

FOREIGN PATENTS

1,159,887 France .................. Feb. 17, 1958