(No Model.)

G. W. STEWART.

CORE DRIVER.

No. 493,192. Patented Mar. 7, 1893.

Fig 1

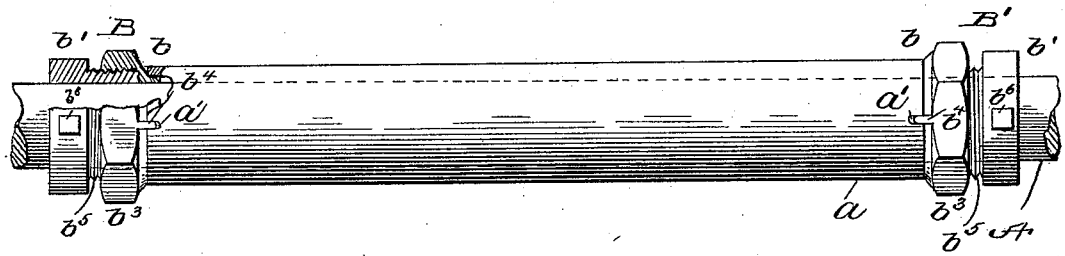


Fig 2

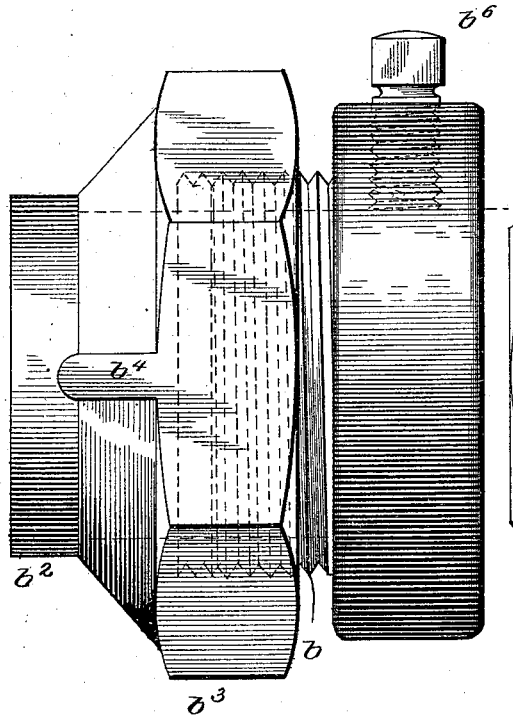
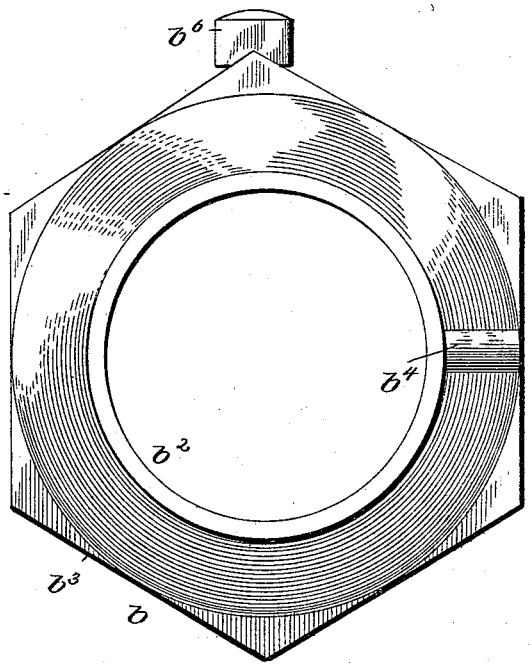


Fig 3



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UNITED STATES PATENT OFFICE.

GEORGE W. STEWART, OF TICONDEROGA, NEW YORK.

CORE-DRIVER.

SPECIFICATION forming part of Letters Patent No. 493,192, dated March 7, 1893.

Application filed June 13, 1892. Serial No. 436,560. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. STEWART, a citizen of the United States of America, residing at Ticonderoga, in the county of Essex and State of New York, have invented certain new and useful Improvements in Core-Drivers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and highly useful improvements in means for holding cores or shells on the rotary shafts of paper machines, and it has for its object the provision of cheap, simple and highly efficient drive-locks which will perfectly center the core and serve to rigidly hold the same the tighter the pull thereon by the paper, all lost motion being taken up as the core begins to revolve with the drive-shaft.

The invention consists in providing a rotary shaft with two right and left-hand driver-locks which are in engagement with the core or shell, whereby as the shaft revolves the driver-locks are both firmly held and with them the core or shell, the latter being made to revolve with the shaft.

The invention further consists in providing a rotary shaft with right and left-hand driver-locks, and an intermediate core or shell having grooves or recesses into which project lugs of movable portions of said driver-locks.

The invention also comprises the detail construction, combination and arrangement of parts, substantially as hereinafter fully set forth and particularly pointed out in the claims.

In the accompanying drawings:—Figure 1 is a view in side elevation, showing my improved driver-locks, parts of the shaft being broken away. Fig. 2 is an enlarged view of one of the driver-locks parts being shown in dotted lines. Fig. 3 is an end view thereof.

Referring to the drawings, A designates a rotary-shaft which forms part of a paper or printing machine (not shown) in which cores are used for winding paper. Upon this shaft is a cylindrical core or shell *a*, which is provided in each end with a slot *a'*.

B, B', designate two driver-locks, each of which consists of two parts *b*, *b'*. The part *b* of each driver-lock has a central cylindrical portion b^2 and an outer nut-like end b^3 of any polygonal shape. From the inner portions of these nut-like ends of both the driver-locks project lugs b^4, which are designed to fit snug within the slots *a'*. The nut-like end of the part *b* is provided with an internal screw-thread with which is designed to engage the externally threaded portion b^5 of the part *b'*. A set-screw b^6 working in an aperture of the thickened portion of part *b'* is designed to bind the latter to shaft A. The threaded connection between the parts *b* and *b'* of the driver-lock B is directly opposed to that of the driver-lock B', or, in other words, the screw-threads of the former are left-handed and those of the latter right-handed. In consequence, as the shaft A is rotated the movable parts of the two driver-locks are moved in opposite directions, and the core or shell will not revolve with the shaft until the movable parts of the driver-locks are firmly bound, the projecting lugs of the locks always remaining in engagement with the ends of the core. Thus all lost motion is taken up and the core is held firm with relation to the shaft. The greater the tension of the paper, the tighter the core will be held.

The advantages of my invention are apparent to those skilled in the art, and it will be specially observed that I am enabled to secure a rigid connection between the shaft and core without having to employ any screw-threaded and nut connection between the shaft and the core, the driver-locks being attached to the shaft by the screws or bolts bearing thereon.

My improved driver-blocks are extremely simple and inexpensive and not liable to readily get out of order or be deranged.

I claim as my invention—

1. The combination with a rotary shaft, of a core or shell thereon, and driver-locks secured on said shaft and having movable parts provided with projections designed to engage said core and cause it to revolve with said shaft, as set forth.

2. The combination with a rotary shaft, of a core or shell thereon having slots in its ends, and driver-locks secured on said shaft and having, each, a movable part provided with a lug or projection designed to fit in the adjacent one of said slots, as set forth.

3. The combination with a rotary shaft, of

a core or shell thereon having slots in its ends, and driver-locks composed each of two parts, one of which is held rigid to said shaft and the other is adjustable and provided with a lug or projection designed to enter the adjacent one of said slots, as set forth.

4. The combination with a rotary shaft, of a core or shell thereon having slots in its ends, and driver-locks composed each of two parts connected by screw-threads, one of said locks having a right-hand thread and the other a left-hand thread, said locks being provided with lugs or projections designed to project into said slots, as set forth.

5. The combination with a rotary shaft, of a core or shell thereon having slots, and driver-locks consisting each of two parts, one of said parts being held rigid to said shaft and provided with an externally threaded portion, and the other part having a cylindrical portion, a lug or projection and a nut-like end having an internal screw-thread, substantially as set forth, the threaded-connection between the parts of the two driver-locks being opposed to each other.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE W. STEWART.

Witnesses:
HERBERT WHEELER,
DORUS C. BADEN.