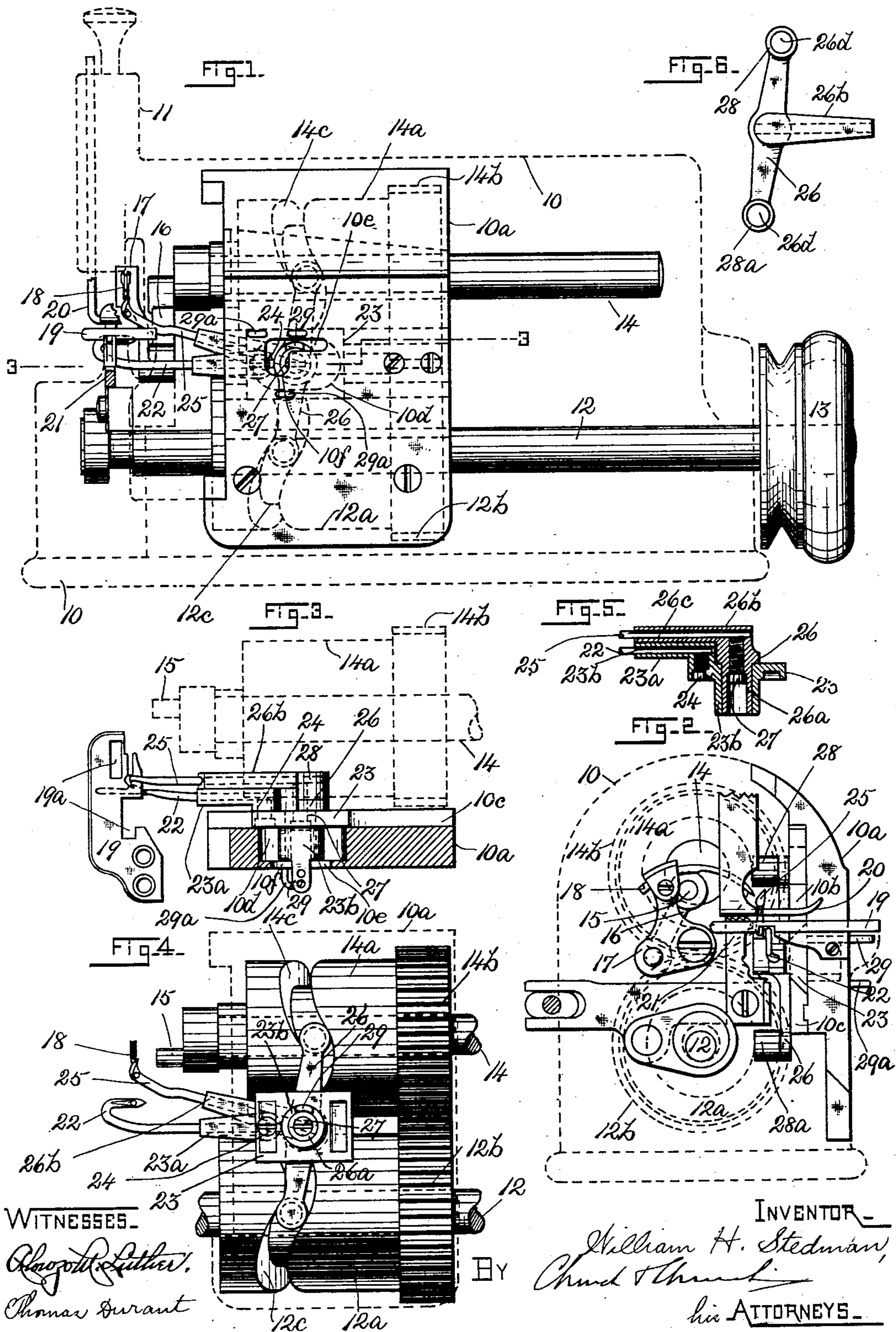


No. 734,987.

PATENTED JULY 28, 1903.

W. H. STEDMAN.
OVERSEAMING MACHINE.
APPLICATION FILED OCT. 21, 1902.

NO MODEL.



UNITED STATES PATENT OFFICE.

WILLIAM H. STEDMAN, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE
MERROW MACHINE COMPANY, OF HARTFORD, CONNECTICUT, A COR-
PORATION OF CONNECTICUT.

OVERSEAMING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 734,987, dated July 28, 1903.

Application filed October 21, 1902. Serial No. 128,159. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. STEDMAN, a citizen of the United States, residing at Hartford, county of Hartford, State of Connecticut, have invented certain new and useful Improvements in Overseaming-Machines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying
10 drawings, forming a part of this specification, and to the figures of reference marked thereon.

This invention relates to overseaming-machines and especially to that type of machines in which the looping or stitch-forming mechanism comprises three instrumentalities—viz., a reciprocating thread-carrying needle, a looper reciprocating horizontally beneath the needle-plate and coöperating with the needle, and a looper having both reciproca-
15 tory and oscillatory motion and coöperating with the needle above and the companion looper below the needle-plate—a machine of the type referred to forming the subject of Patent No. 591,049, to which reference may
20 be had for a more complete description and illustration of the general construction and operation of such machines than is necessary to be given herein.

The invention herein has to do particularly
30 with the means for supporting, securing, and carrying the loopers, the object of the invention being to improve the general construction and operation of the portions of the machine to which the improvements relate and
35 thereby to increase the efficiency and facilitate the adjustment and manipulation of the machine.

In the accompanying drawings, Figure 1 is a front elevation with the mechanism consti-
40 tuting the present improvements and adjacent portions of the machine's mechanism largely in full lines and the outline of the frame and head in dotted lines. Fig. 2 is an end elevation looking toward the right, Fig.
45 1, but with some of the parts omitted to avoid obscurity. Fig. 3 illustrates in plan the means whereby the loopers are supported, the door or cap of the machine-frame being shown in cross-section on the line 3 3 of Fig. 1. Fig.
50 4 is a front elevation of the loopers, their car-

riers, and the cams for operating them, the machine door or cap being shown in dotted lines. Fig. 5 is a sectional view showing the means whereby the looper-supports are assembled and the loopers secured thereto. Fig. 55 6 is a rear elevation of the oscillating looper support or carrier.

Throughout the several figures of the drawings like reference-numerals indicate the same parts. 60

In said drawings, 10 indicates the main-frame housing or casing of the machine; 11, the head; 12, the main shaft; 13, the driving-pulley, and 14 a second shaft above and parallel with the main shaft. The shafts 12 and 14 bear, respectively, cam-cylinders 12^a and 14^a, having intermeshing gears 12^b and 14^b for insuring the unitary rotation of the shafts and cam-cylinders, the latter having the usual cam-grooves 12^c 14^c, whereby the loopers are
65 actuated to cause them to coöperate with each other and the needle in the operation of overseam-sewing. 70

The number 10^a indicates the cap for closing an opening in the frame 10 through which
75 the interior of the machine may be reached. The second shaft 14 at its end adjacent the machine-head 11 bears an eccentric-pin 15, connected by a link 16 with the needle-carrier 17, the latter being pivotally secured to the
80 end wall of the machine-frame. The needle 18 is mounted in the carrier 17 and through the described train of mechanism is reciprocated in a path concentric with the pivotal support of the carrier. 85

The machine is provided with a needle-plate 19, supported beneath the head 11, and also preferably with a variety of "four-motion" feed now in common use and including the presser-foot 20. The feed is driven from
90 the main shaft 12, and serrated portions of the feed-dog 21 (partly broken away in the drawings) operate through openings 19^a in the needle-plate 19.

The various elements thus far described
95 are substantially the same as those now in common use in this type of machines and need no further detailed explanation.

Referring now particularly to the parts embodying the present invention and other parts 100

of the machine closely associated therewith, the number 22 indicates the horizontally-reciprocating looper, and 23 the sliding block in which it is supported and carried. The sliding block 23 is formed on its rear face and near one end with an extension or arm 23^a, having a hole 23^b therethrough for the reception of the looper-shank, and the looper is secured in the arm of the sliding block by the screw 24. The upper and lower edges of the sliding block 23 are beveled, as is usual, and the said block is received and adapted to slide longitudinally between beveled gibs 10^b 10^c on the inner face of the door 10^a, as shown in the Fig. 2.

The number 25 indicates the looper, having both reciprocatory and oscillatory motion, and 26 the support or carrier therefor.

The carrier 26 midway its length has a pivot or stem 26^a on one face and on its opposite face an extension or arm 26^b, radiating from the axial center of the said stem. The arm 26^b has a hole 26^c therethrough, preferably radiating from and crossing the center of oscillation of the carrier 26, for the reception of the shank of the looper 25. To secure the looper to the carrier, a set-screw 27, located in a central hole in the stem 26^a and passing through the carrier, is adapted to engage the looper-shank in the line of its center of oscillation.

The sliding block 23 is provided on its front face with a hub 23^b, and the said block and hub are bored to receive the pivot or stem 26^a of the carrier 26 to pivotally support the carrier in the block. (See Fig. 5.) When the block and carrier are assembled in the manner described, the arms 23^a 26^b are in close proximity, and upon the oscillation of the carrier 26 the arm 26^b rocks in a vertical plane parallel with the rear face of the arm 23^a. The sliding block is provided with a projection 29 upon its hub, having two holes or thread-eyes intended for the passage of the looper-threads and in connection with the thread-guides 29^a serves as a take-up upon the reciprocation of the sliding block.

The carrier 26 is provided with the usual pins 26^d, upon which there are mounted rollers 28 28^a, adapted to enter, respectively, the cam-grooves 14^c 12^c in order that upon the rotation of the cams 12^a 14^a the sliding block and the carrier shall be reciprocated longitudinally in unison and simultaneously with such movement the carrier shall be rocked on its pivotal support to cause the loopers 22 25 to cooperate with each other and the needle in the manner before explained and well understood.

The cap 10^a is recessed on its rear face, as at 10^d, to accommodate the hub 23^b of the sliding block 23, and the bottom wall of the said recess is cut through or slotted, as at 10^e, to permit the take-up 29 to project there-through.

To enable the set-screws 24 27 to be readily reached for manipulation, an opening 10^f is

provided through the door 10^a, with which both the said screws register at given points in the travel of the sliding block. In Fig. 1 the said opening is shown as an enlargement at one end of the slot 10^c.

The manner of supporting the oscillating looper carrier at its center of oscillation is particularly advantageous in that it permits lightness of construction of the portion of the carrier remote from its said center of oscillation, where the oscillatory movement is greatest, and permits a pivotal bearing of greater proportionate length than heretofore in a convenient form for grinding to fit, and, furthermore, the screw for fastening the looper in this carrier is located at a point especially accessible where there is no vertical movement of the parts.

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

1. In an overseaming-machine, the combination of a needle, a looper-carrier adapted for oscillatory and reciprocatory motion and having a passage crossing its center of oscillation to receive a looper-shank, a set-screw at said center to secure the looper to the carrier, a block or carriage on which the carrier is pivotally supported, a looper supported in the carrier and a looper supported in the block, means for supporting the block and means for oscillating the carrier and reciprocating the same and the block in unison, to cause the loopers to coact with each other and with the needle; substantially as described.

2. In an overseaming-machine, the combination of stitch-forming mechanism including a needle and two loopers cooperating therewith and with each other and having respectively combined reciprocatory and oscillatory motion and reciprocatory motion, a carrier for the reciprocating and oscillating looper having a pivotal stem and a set-screw located therein to engage the looper-shank at the center of its oscillation, a block supporting the reciprocating looper and having a hub to receive the pivotal stem of the carrier, means for supporting the block and means for actuating the carrier and block, substantially as described.

3. In an overseaming-machine, the combination of stitch-forming mechanism including a needle and two loopers cooperating therewith and with each other and having respectively combined reciprocatory and oscillatory motion and reciprocatory motion, a carrier for the reciprocating and oscillating looper having a pivotal stem, a block supporting the reciprocating looper and having a hub to receive the stem of the carrier, a take-up carried by the said hub and means for actuating the carrier and the block; substantially as described.

4. In an overseaming-machine, the combination of stitch-forming mechanism including a needle and two loopers cooperating therewith and with each other and having respec-

tively combined reciprocatory and oscillatory motion and reciprocatory motion, a carrier for the reciprocating and oscillating looper having a pivotal stem, a block supporting the reciprocating looper and having a hub to receive the stem of the carrier, a take-up formed on one side of the said hub and means for actuating the carrier and the block; substantially as described.

WILLIAM H. STEDMAN.

Witnesses:

W. A. W. STEWART,
ALONZO M. LUTHER.