

D. F. CROWDER.

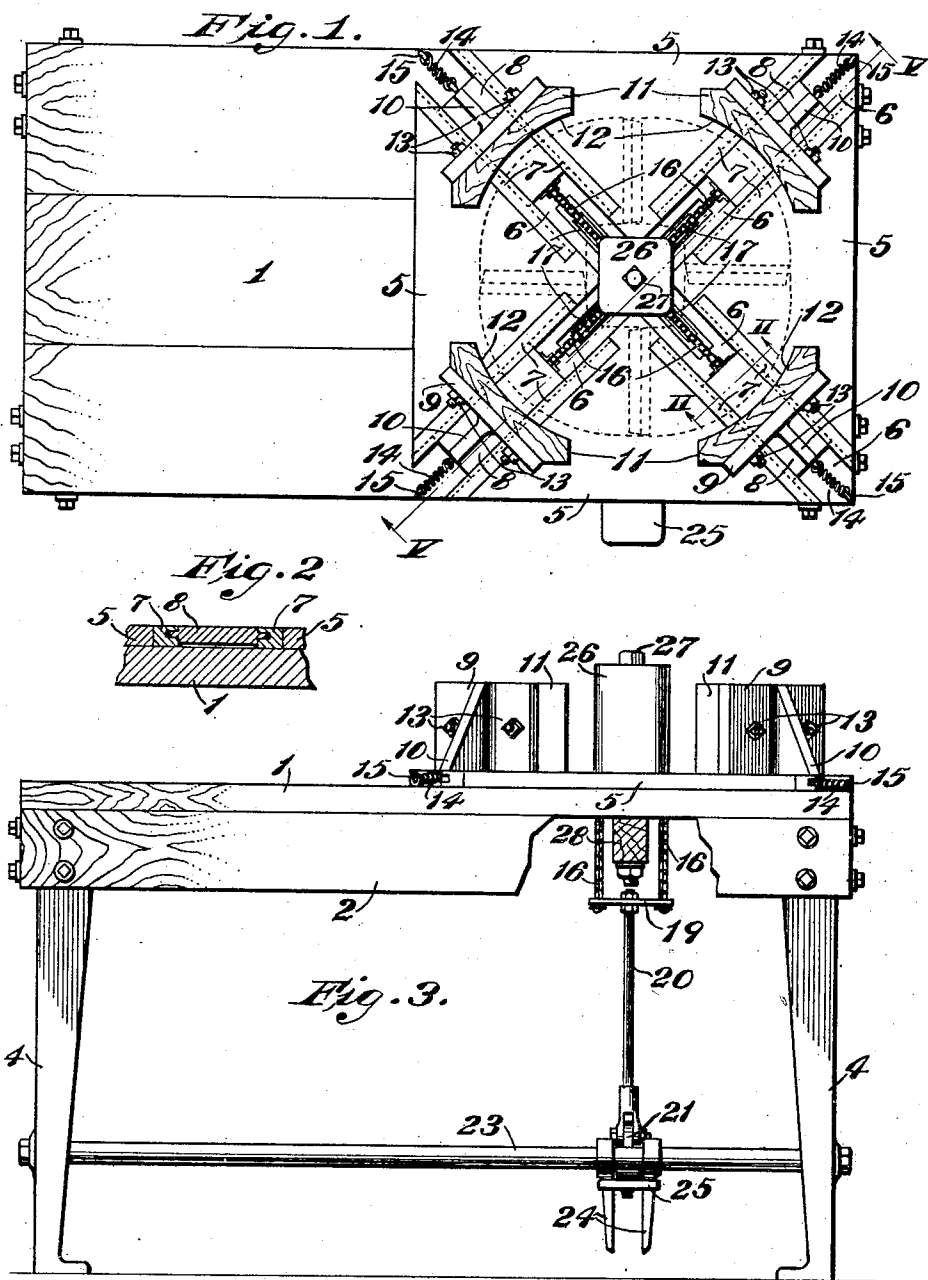
MACHINE FOR NESTING OR BUNDLING STOVEPIPE ELBOWS AND THE LIKE.

APPLICATION FILED APR. 2, 1917.

1,246,557.

Patented Nov. 13, 1917.

2 SHEETS—SHEET 1.



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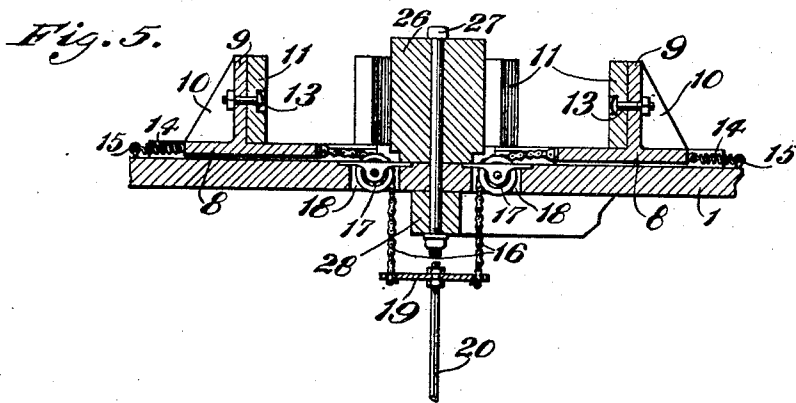
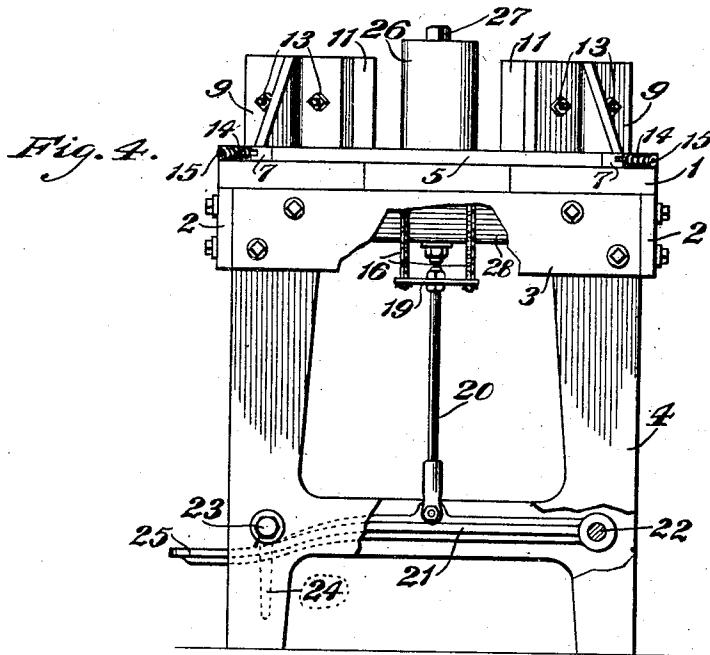
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UNITED STATES PATENT OFFICE.

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MACHINE FOR NESTING OR BUNDLING STOVEPIPE-ELBOWS AND THE LIKE.

1,246,557.

Specification of Letters Patent.

Patented Nov. 13, 1917.

Application filed April 2, 1917. Serial No. 159,210.

To all whom it may concern:

Be it known that I, DAVID F. CROWDER, a citizen of the United States, residing at the city of St. Louis, State of Missouri, have
5 invented a certain new and useful Machine for Nesting or Bundling Stovepipe-Elbows and the like, of which the following is a specification, reference being had to the accompanying drawings, forming a part
10 thereof.

This invention relates to a certain new and useful machine for nesting or bundling stove-pipe elbows and the like.

For convenience in storing or shipping
15 stove-pipe elbows or the like, it is customary to nest a plurality, preferably four, of them together in the form of an approximately ring-like or annular package. Such nesting is accomplished by first fitting the elbows
20 end in end, the usually crimped or tapered, insertible end-portion of one elbow being inserted in the receiving end-portion of the next elbow, and the sections or elbows then pressed tightly together to make the pack-
25 age or bundle rigid. This has heretofore, so far as I am aware, been usually done entirely by hand and is more or less troublesome and slow and, since considerable pressure is required in producing a rigid nesting
30 of the elbows to obviate as far as possible separation of the elbows one from the other in handling of the package, frequently causes injury to the hands of the workman or operator.

35 My present invention, therefore, has for its principal object the production of a simple and efficient machine to avoid the difficulties and disadvantages above noted and to facilitate and expedite the assembling
40 or nesting of the elbows or the like into a substantially rigid package or bundle readily and conveniently handled.

With the above and other objects in view, my present invention resides in certain novel
45 features of form, construction, arrangement, and combination of parts, all as will hereinafter be described and afterward pointed out in the claims.

In the accompanying drawings, wherein
50 I illustrate my invention in preferred form, Figure 1 is a top plan view of the machine;

Fig. 2 is a fragmentary section on the line 2-2, Fig. 1;

55 Fig. 3 is a front elevation of the machine, portions of the frame being broken away;

Fig. 4 is an end elevation of the machine, portions of the frame being also broken away; and

Fig. 5 is a fragmentary section on the line 60 5-5, Fig. 1.

Referring to the said drawings, in which like reference-characters refer to like parts throughout the several views, my new machine preferably includes a table 1 mounted
65 on a rectangular frame comprising side members 2 and end members 3, said frame being supported at its ends by suitably braced rigid leg-frames or the like 4.

On one end portion of the table 1 is a bed-
70 plate 5, which is suitably provided with crossed diagonal slots 6 extending from corner to corner thereof. Preferably, however, the plate 5 comprises four separate triangular sections secured on the table 1 in spaced
75 relation, as shown, to provide the slots 6.

The walls of the plate-sections 5 on opposite sides of the slots 6 are recessed to receive grooved metal strips 7 which constitute or provide slide-ways or guides for slid-
80 able blocks 8, the upper face of strips 7 being preferably flush with the upper face of the plate-sections 5. The blocks 8 have upstanding preferably integral flanges or bracket-extensions 9, which are suitably
85 braced by webs 10. Shoes or presser-blocks 11, preferably of wood and having curved operating or elbow-engaging faces 12, are detachably secured, as by bolts 13, on the inner faces of said flanges or bracket-extensions 9.

14, 14, indicate preferably coiled springs which are secured at one end to the outer ends of the slidable blocks 8 and at their other end, as at 15, to the bed-plate 5 or table
95 1. The springs 14 are adapted to yieldingly hold the blocks 8 with their shoes 11 in normal retracted position and serve to restore them to such position after each actuation thereof, as will be presently described.

100 Attached at one end to the inner ends of the slidable blocks 8, are chains or the like 16, which extend over grooved or other suitable sheaves or pulleys 17 mounted on the table 1 and thence downward through slots
105 18 in table 1 and have their other ends secured to a plate or other suitable device 19 mounted on the upper end of a treadle-bar 20. Treadle-bar 20 is pivotally connected at its lower end to a treadle-lever 21, which is
110 pivotally mounted at its rear end on a cross-rod 22 connecting the end-frames 4. The

treadle-lever 21 extends forwardly under another cross-bar 23 also connecting the end-frames 4, this cross-bar 23 serving as a stop and having depending guides 24 thereon for the treadle-lever 21. At the forward end, the treadle-lever 21 is preferably provided with the usual pedal plate 25.

At the intersection of the slots 6, a centering-device preferably in the form of a block 26 having rounded corners, as shown, is detachably mounted and secured, as by a through-bolt 27, on the table 1, said bolt extending down through a cross-beam 28 forming a part of the bed-frame for the table. This cross-beam 28 may, however, be omitted, if desired.

In the operation of the machine, the several elbows illustrated in dotted lines in Fig. 1 are assembled on the bed-plate around the block 26 and between the shoes 11 in the relation in which they are to be nested or joined. The insertible ends of the elbows may then be quickly brought into proper engaging relation with the receiving-ends of the adjoining sections, and then by depressing the treadle-lever 21, the slidable blocks 8 with their shoes 11 are drawn against the respective elbows so as to force the latter into tight engagement one with the other. This being accomplished, the treadle-lever 21 is relieved of the foot-pressure thereon, when, the springs 14 immediately restoring the slidable blocks 8 and their shoes 11 to normal position, the nested or bundled elbows may be conveniently removed from the machine for storage, shipment, or other handling.

The shoes or presser-blocks 11 and the centering-block 26 may be made in sets of different sizes and interchangeably mounted to accommodate the machine to elbow or pipe-sections of different sizes. The clear portion of the table 1 to the side of the assembling and nesting mechanism may be used to receive either the separate elbows before nesting or the completed elbow nest or bundle, as may be desired.

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

1. The combination with a machine of the character described, the same comprising a supporting-bed, a plurality of fixed converging slide-ways on the bed, presser-members movably mounted in the slide-ways, means for yieldingly holding the presser-members in, and restoring the same to, normal position in the slide-ways, and means for moving the presser-members simultaneously toward each other under pressure, of a center-

ing-member mounted on the machine at the point of convergence of the slide-ways, said centering-member being in fixed position relatively to all the slide-ways.

2. The combination with a machine of the character described, the same comprising a supporting-bed, a plurality of fixed converging slide-ways on the bed, presser-members movably mounted in the slide-ways and correspondingly grouped about the centering-member, coiled springs connected to the bed and to the presser-members for yieldingly holding the presser-members in, and restoring the same to, normal position in the slide-ways, a treadle pivoted on the machine, and connections between the treadle and the several presser-members for simultaneously moving the latter toward each other on depression of the treadle, of a centering-member mounted on the machine at the point of convergence of the slide-ways, said centering-member being in fixed position relatively to all the slide-ways.

3. The combination with a machine of the character described, the same comprising a supporting-bed, a plurality of fixed converging slide-ways on the bed, presser-members movably mounted in the slide-ways, means for yieldingly holding the presser-members in, and restoring the same to, normal position in the slide-ways, a treadle pivoted on the machine, and chains respectively connected at their ends to the presser-members and to the treadle for simultaneously moving the presser-members toward each other on depression of the treadle, of a centering-member mounted on the machine at the point of convergence of the slide-ways, said centering-member being in fixed position relatively to all the slide-ways.

4. In a machine of the character described, the combination of a table, a plurality of plates fixed in spaced relation on the table and providing a plurality of fixed converging slide-ways, a centering-member on the table at the point of convergence of the several slide-ways, said centering-member being in fixed position relatively to all the slide-ways, presser-members movably mounted in the slide-ways and correspondingly grouped about the centering-member, means for yieldingly holding the presser-members in, and restoring the same to, normal position in the slide-ways, and means for simultaneously moving the presser-members toward each other under pressure.

In testimony whereof, I have signed my name to this specification.

DAVID F. CROWDER.