

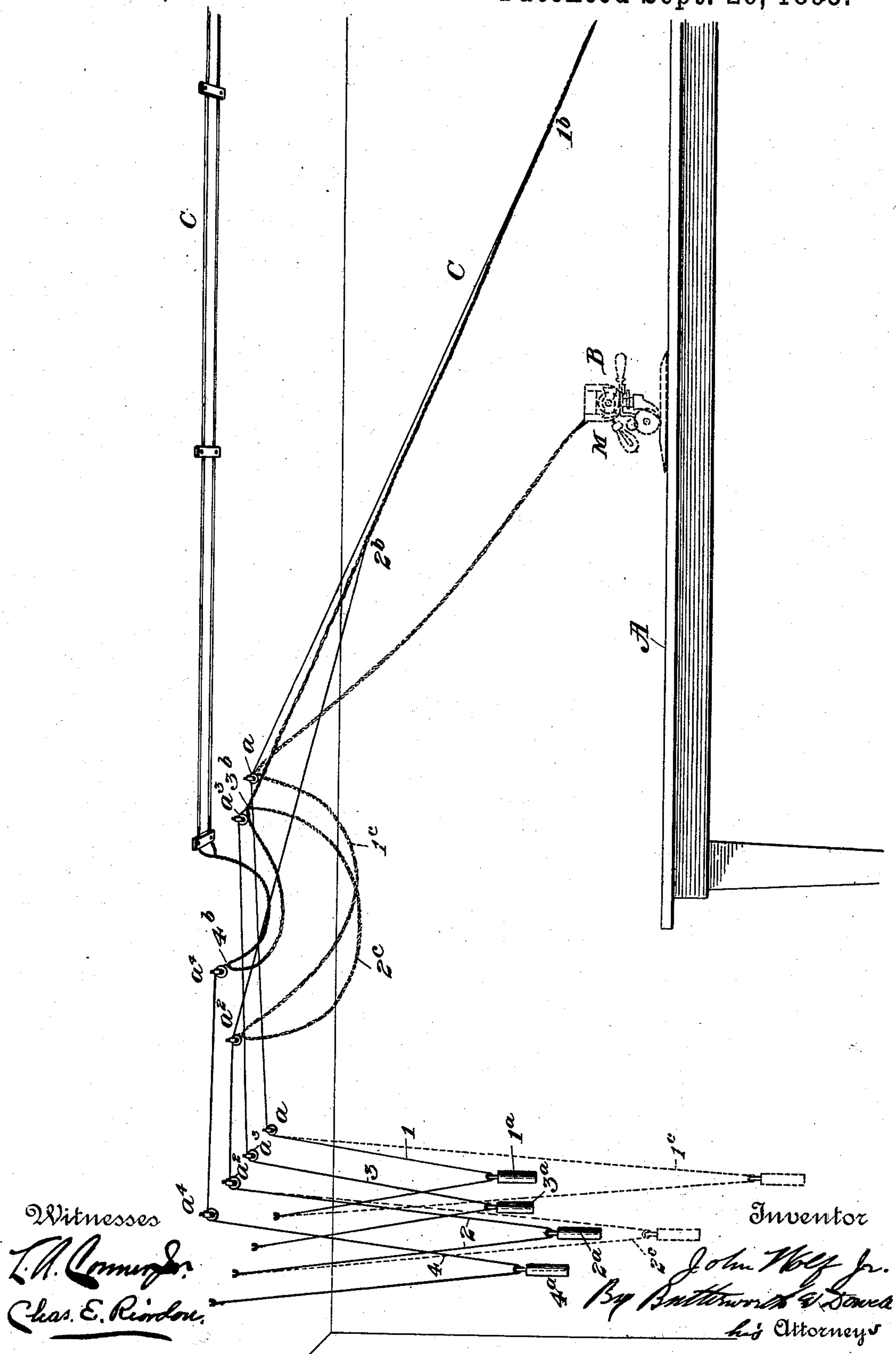
(No Model.)

J. WOLF, Jr.

TAKE-UP DEVICE FOR CLOTH CUTTING MACHINES.

No. 505,741.

Patented Sept. 26, 1893.



UNITED STATES PATENT OFFICE.

JOHN WOLF, JR., OF CINCINNATI, OHIO, ASSIGNOR OF ONE-HALF TO JACOB BLOCH, OF SAME PLACE.

TAKE-UP DEVICE FOR CLOTH-CUTTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 505,741, dated September 26, 1893.

Application filed May 17, 1893. Serial No. 474,577. (No model.)

To all whom it may concern:

Be it known that I, JOHN WOLF, Jr., a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Take-Up Devices for Cloth-Cutting Machines; and I do hereby 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 devices for paying out and taking up the slack in electrical wires, &c., used in connection with electrically operated cloth-cutting instruments or similar machines wherein the cutting mechanism is impelled by a current derived through a flexible conductor connecting with a source of electric energy or power.

In establishments employing a large number of tables arranged upon the floor of a room of considerable size, say from one to two hundred feet in length, it is necessary to provide for each cutting table, or small cluster of tables, a separate wire connecting with the source of electric supply, on account of the difficulty in keeping a lengthy wire from becoming entangled with the tables or interfering with the work of the operatives; and the objects of my invention are to dispense with the extra cost incident to the use of separate wires for different cutting tables, and at the same time to provide means whereby a wire or conductor of considerable length may be employed, any superfluity being automatically taken up when not required for use and sustained in an elevated position out of the way of the operatives, but so as to be easily drawn upon or paid out when desired for use; whereby the operator of a machine connecting with a single wire or conductor may readily move such machine from table to table without hinderance or the necessity for separate wires, and without interfering with the work of other operatives in different parts of the room.

The invention will first be described with reference to the accompanying drawing, which forms a part of this specification, and in which is represented a perspective view, in full and dotted lines, illustrating the con-

struction and operation of an automatic take-up device embodying my invention as applied to a cloth-cutting machine.

In the drawing A, may denote a cutting table on which is placed a cloth-cutting machine B, (shown in dotted lines only) of any suitable construction, but preferably a type of machine of the character invented jointly by myself and J. Bloch, for which we have heretofore filed a joint application for Letters Patent of the United States, and in which we employ an electric motor connected in circuit with a stationary source of electric supply by means of circuit wires supported from the ceiling or other elevated portion of the building.

C, denotes the circuit wires connecting with the electric motor M, of the machine B, and leading therefrom to any suitable source of electric energy. The insulated wires C, if of the usual length required for a single cutting table, or small cluster of tables, would permit of the movement of the machine within a very limited space, and in a large room a separate wire would be required for each table or cluster of tables, unless a wire of considerable length be used, in which case the superfluous length of wire, by dropping upon the floor and tables, is liable to seriously interfere with the operations of the workmen, and also endangers the operation of the machine to which it is connected. To overcome these objections and at the same time to dispense with the extra cost incident to the use of separate wires, I have devised means for using a wire of any desired length which may be let out to the desired extent and automatically taken up and suspended when not required for use, without liability to become entangled with the tables, &c., or interfere with the workmen or the proper manipulation of the machine.

In the drawing 1, 2, 3, 4, may denote a series of weighted cords one end of each of which may be secured to the ceiling or other elevated fixed support, and the opposite end thereof is connected with the flexible insulated circuit wires C or other flexible conductor; the connections of the several cords being made at suitable distances apart to divide the wire into as many sections or lengths as may be suited to the number of cords used

and length of wire required. The several cords are each preferably provided with a weight having a small friction wheel or pulley connected thereto so as to ride easily along the cord when the movable part of the latter is drawn out or slackened with the movements of the machine. The cord 1, extends from the weight 1^a, over the pulleys *a*, *a*, or other suitable elevated support, to the point 1^b, of the cord C, to which its free end is fastened. The cord 2 passes from the weight 2^a, over pulleys *a*², to the point of attachment 2^b. The cord 3, passes from the weight 3^a, over suitable pulleys *a*³, to the point of attachment 3^b, and the cord 4, from the weight 4^a, over suitable pulleys *a*⁴, to the point of attachment 4^b. It will thus be seen that each weight acts upon a certain length or section of the circuit wire and tends constantly to draw the latter up so as to hold the same in suspension, as illustrated partly in full lines and partly in dotted lines indicating different positions of the cords and weights. In the position shown in full lines, as will be seen, the cords 1 and 2, have been drawn out, and the weights 1^a, and 2^a, lifted from their normal positions, (which are indicated by the dotted lines 1^c, 2^c,) to the positions shown in full lines, while the weights and cords 3, 3^a, and 4, 4^a, are shown in full lines in their normal positions. When the cutter is returned to the position upon the table indicated in dotted lines, the weights 1^a, and 2^a, will be lowered to the position indicated in dotted lines, while the slack in the circuit wire will be held in suspension in the manner indicated by the dotted lines 1^c, and 2^c, respectively. By these means the cutter may be moved the full length of the room, and in any position thereof the wire will be held sufficiently taut by the weights to prevent any portion thereof from dropping down upon the table or interfering with the workmen, while any superfluous length of wire will be readily taken up and suspended in the manner hereinbefore explained. The several weights will each be heavy enough to slightly overbalance the conductor section or length of wire to be suspended thereby, and they are adapted to be drawn up and let down successively so that no more weight need be lifted by the operator than is necessary for the increased length of wire desired for use at the moment, while the combined weights are no heavier than is necessary to suspend the total length of wire suited to the various requirements to

which the machine may be put. It will be understood, of course, that the application of the invention is not limited to any particular type or class of machines, and that the number and arrangement of the weights and cords may be varied to meet varying requirements without departing from the spirit of my invention, and hence I do not desire to be limited to the exact construction and arrangement of parts shown and described.

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

1. In combination with the cutting machine, the electric motor mounted thereon, and the flexible conductor extending from said motor over an elevated support and connecting the same with a source of electric supply, of the automatic take-up device comprising the weights and cords connected at intervals with said conductor and adapted to automatically take up and pay out the slack while the machine is being moved about the room or from table to table, substantially as described.

2. The combination with the cutting machine and a suitable source of power, of an automatic take-up device comprising a plurality of weights and cords connected at intervals with a flexible conductor connecting the machine to be driven with the source of power; said cords passing over an elevated support, so as to automatically take up and pay out the slack while the machine is being moved about the room or from table to table, substantially as described.

3. In combination with a cloth-cutting machine the electric motor carried thereby for actuating the knife and a source of electric supply, the flexible insulated circuit wires in circuit with said motor, and the automatic take-up device comprising a series of cords passing over elevated friction rollers and connected at intervals with said circuit wires, and a separate weight for each cord carrying a pulley adapted to move along the cord when the latter is drawn out or slackened, whereby any slack or superfluous length of wire is automatically taken up ready to be paid out when desired, substantially as described.

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

JOHN WOLF, JR.

Witnesses:

T. J. COLLINS,
WM. LANDWEHR.