

P. & C. R. DOSCH.
CLAMPING APPLIANCE.
APPLICATION FILED JAN. 27, 1912.

Patented Apr. 8, 1913.

1,058,223.

Fig. 1.

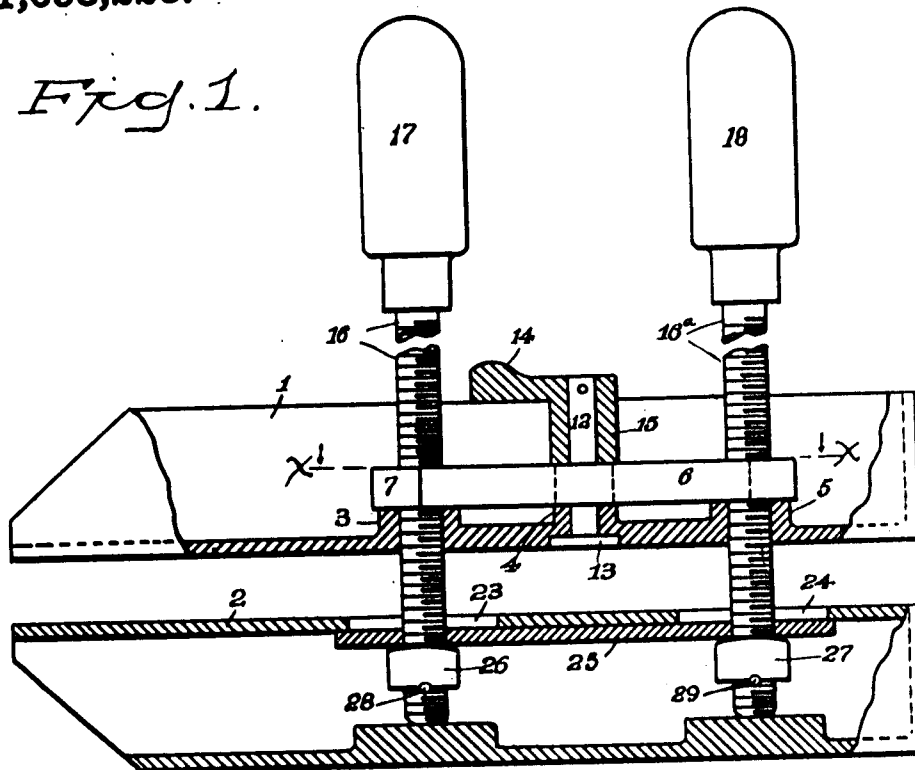


Fig. 2.

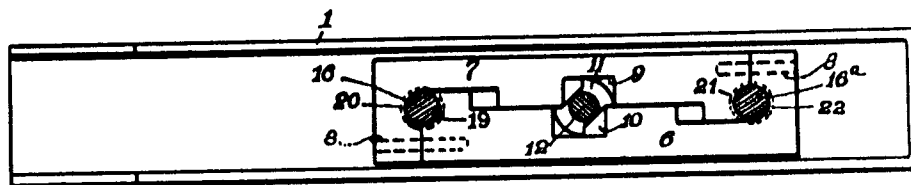
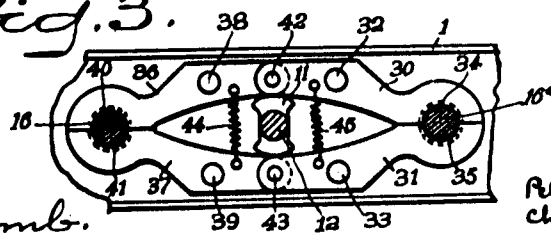


Fig. 3.



WITNESSES:

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CLAMPING APPLIANCE.

1,058,223.

Specification of Letters Patent.

Patented Apr. 8, 1913.

Application filed January 27, 1912. Serial No. 873,889.

To all whom it may concern:

Be it known that we, PETER DOSCH and CHARLES R. DOSCH, citizens of the United States, residing at Stratford, Fairfield county, Connecticut, have invented certain new and useful Improvements in Clamping Appliances; and we do 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.

Our invention relates to certain improvements in clamping appliances and has for its object to provide a simple and effective device of this description in which the screw operating elements shall be engaged with separable nut elements whereby the clamping jaws may be quickly adjusted, and with these ends in view our invention consists in certain details of construction and combination of parts such as will be hereinafter fully described and then more particularly pointed out in the claims which conclude this description.

In the accompanying drawing Figure 1 is a sectional elevation of our improved clamping appliance—Fig. 2 a section at the line $x-x$, of Fig. 1, and Fig. 3 a detail sectional elevation of a modification of our improved sectional nut.

Similar numerals of reference denote like parts in the several figures of the drawing.

1, 2, are the clamping jaws of any approved dimensions and shape. These jaws are preferably made of metal the jaw 1 having three perforate bosses 3, 4, 5, extending upwardly from the bottom face thereof.

6, 7, are elongated bars that rest upon the bosses 3, 4, and 5, and these bars are capable of lengthwise movements and are also doweled together by pins 8 (shown in dotted lines), in order that said bars may be properly guided in their lengthwise movements. These bars 6, 7, are cut away at their central portions to form recesses 9, 10, and extending within these recesses is a cam 11 that is carried by a pin 12, which latter has a circular head 13 at its lower end that is contained within a countersunk circular recess in the bottom of the jaw 1, while to the upper extremity of this pin is secured a thumb piece 14 that has a hub 15 which extends downwardly and rests upon the bars 6 and 7, so that it will be clearly understood that said bars are confined between

the boss 4 and said hub 15. By swinging this thumb piece 14 in one direction the cam 11 will be operated to strike against the end walls of the recesses 9, 10, to thrust the bars 6, 7, in opposite directions, while the reverse operation of this thumb piece will effect the reverse movements of said bars.

16, 16^a, are the operating screws provided with suitable handles 17, 18, which screws are normally engaged by nut segments 19, 20, and 21, 22, the segments 19 and 22 being carried by the bar 6 while the segments 20, 21 are carried by the bar 7, these screws passing freely through the perforate bosses 3, 5, and also freely through elongated openings 23, 24, in the jaw 2 and through a free keeper plate 25, immediately below said openings, nuts 26, 27 being run on the ends of said screws against said plate and secured as against rotation by means of pins 28, 29, driven through the screws and engaging indentations in the nuts themselves, said pins acting as locking devices to prevent displacement of the nuts. From the above description it will be understood that these screws are really swiveled to the jaw 2, and engage with separable nut segments carried by the jaw 1.

In utilizing clamping appliances there is a loss of time and great inconvenience due to the fact that the screws must be operated to adjust the clamping jaws to work the dimensions of which differ widely, but by the operation of the thumb piece 14 the bars 6, 7, which carry the complementary nut segments may be operated so as to spread these segments away from the screws thereby enabling the jaws to be manually adjusted to the work and thereafter the thumb piece is operated to bring the nut segments again into engagement with the screws whereupon the latter are operated to effect the final clamping operations.

It frequently happens that, in some instances, one clamping jaw should be in advance of the other, and this is possible in our improvement, owing to the fact that the screws extend through the elongated slots 23, 24, in the jaw 2, thereby enabling said jaw to be adjusted so that it will extend either forward or rearward of the jaw 1, the keeper plate 25 insuring the parallelism of the screws in effecting these adjustments.

There are several ways in which the ele-

ments that carry the complementary nut segments may be constructed and operated, and at Fig. 8 we have shown a construction comprising bars 30, 31, that are pivoted respectively at 32, 33, to the jaw 1, each bar carrying complementary nut segments 34, 35, and bars 36, 37, pivoted at 38, 39, to said jaw 1, and carrying complementary nut segments 40, 41, the inner extremities of these bars being pivoted together at 42, 43, the cam 11 carried by the pin 12 operating against said bars at their pivotal points 42, 43, to engage the nut segments with the screws 10, 10^a, while springs 44, 45, whose extremities are secured to said bars 36, 37 and 30, 31, respectively, operate to spread said bars and separate the nut segments from the screws. We therefore do not wish to be limited to any particular construction of separable nut segments since our invention in this respect resides in the broad idea of providing segments of this description which may be operated at the will of the operator.

25 Having thus described our invention what we claim as new and desire to secure by Letters Patent is:—

1. A clamp comprising a pair of jaws, threaded adjusting rods connecting the jaws, a pair of oppositely disposed bars carried by one of the jaws and having complementary nut segments for engaging the rods, each bar being formed of pivotally connected sections and each section being piv-

otally connected to the jaw, yieldable means 25 connecting the bars, and means for separating the bars to release the adjusting rods.

2. A clamp comprising a pair of jaws, threaded adjusting rods extending through one jaw, means for swiveling the rods to the other jaw, a pair of oppositely disposed sectional bars carried by the first mentioned jaw, each bar being formed of pivotally connected sections and each section being pivoted to the jaw, the free ends of the sections 40 being provided with complementary nut segments for engaging the rods, springs connecting the bars, and means for separating the bars to release the adjusting rods.

3. A clamping appliance comprising a pair of jaws, adjusting rods connecting the jaws, nuts carried by one jaw for engaging the rods, means for disengaging the nuts from the rods, the other jaw being provided with longitudinal slots through which the rods extend, a guide plate mounted on the rods beneath the slots and slidable longitudinally in the jaw, and clamping means on the rods for engaging the plate to hold the same in slidable relation to the slots. 45

In testimony whereof we affix our signatures in presence of two witnesses.

PETER DOSCH.
CHAS. R. DOSCH.

Witnesses:

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