

July 20, 1937.

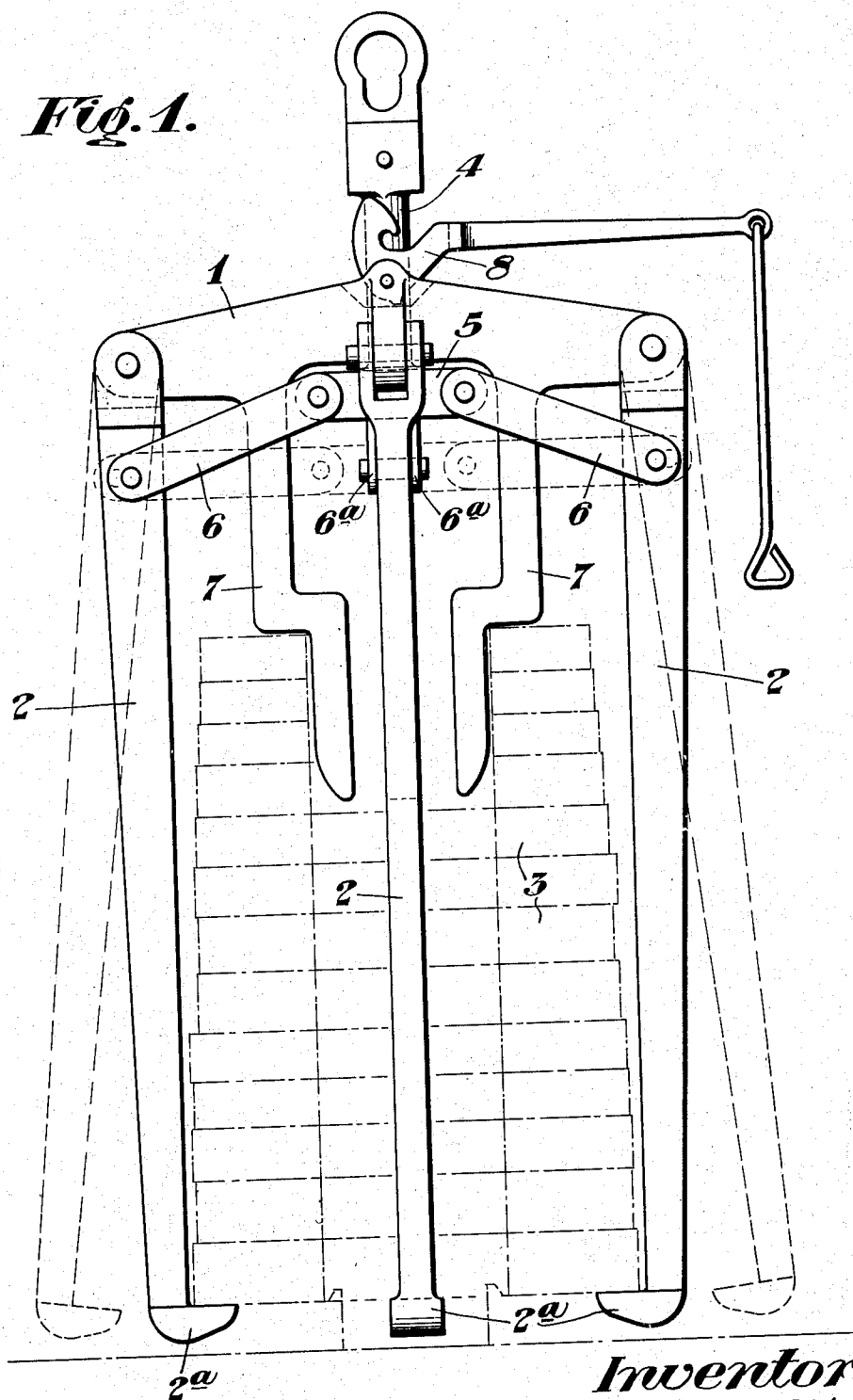
H. C. RALSTON ET AL
MATERIAL HANDLING DEVICE

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2 Sheets-Sheet 1

Fig. 1.



Inventors:

HARLEY C. RALSTON and
THOMAS D. WILLIAMS.

by: *Usina & Rauber*
their Attorneys.

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Fig. 2.

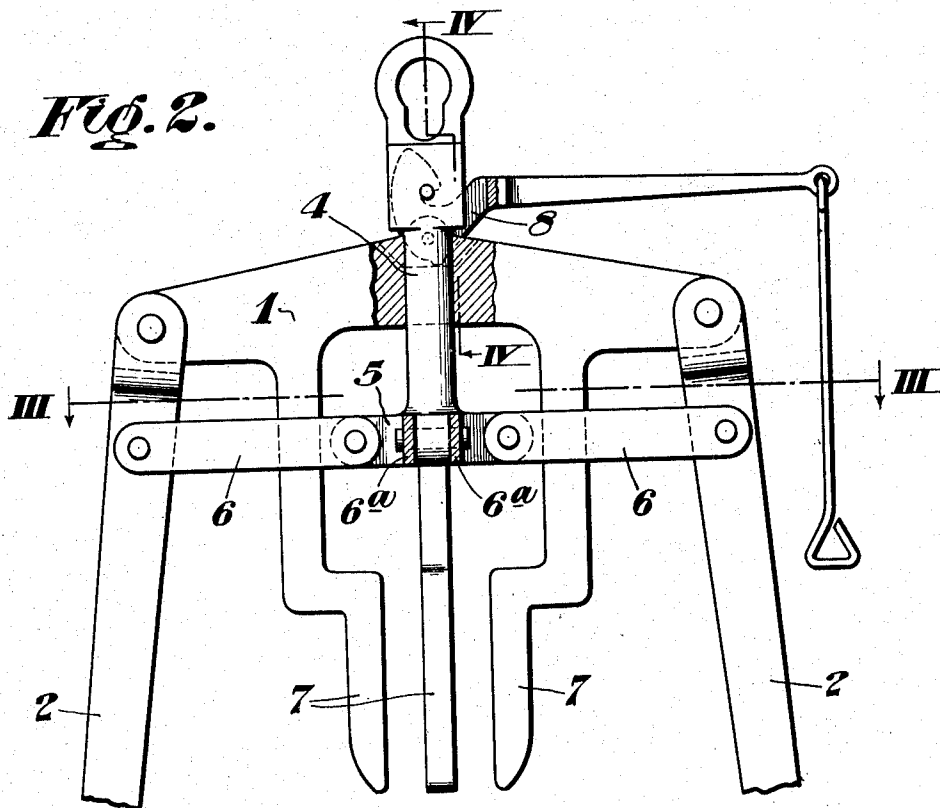


Fig. 3.

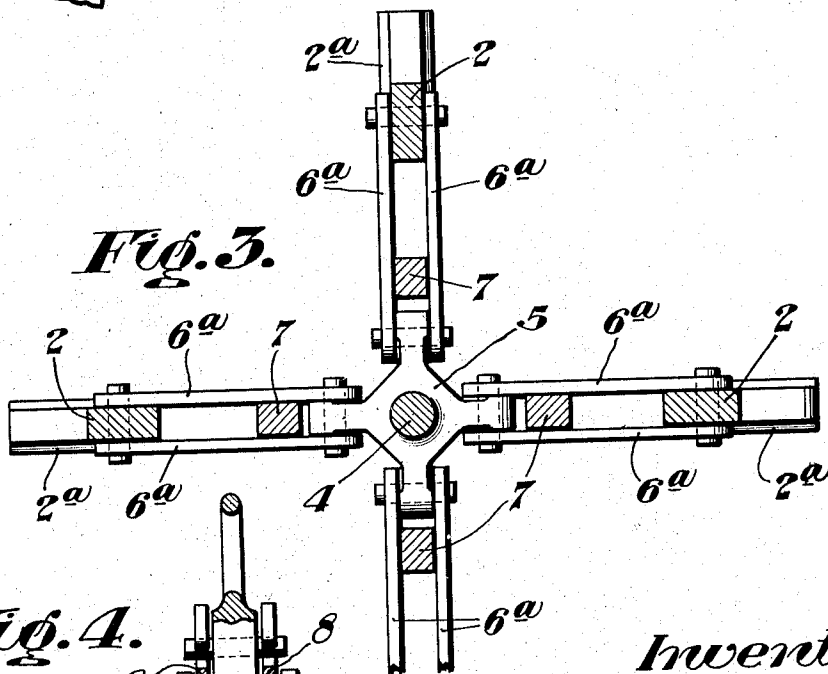
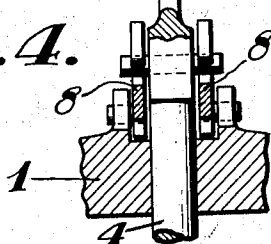


Fig. 4.



Inventors:
HARLEY C. RALSTON and
THOMAS D. WILLIAMS.
by: Veina & Rauber
their Attorneys

UNITED STATES PATENT OFFICE

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MATERIAL HANDLING DEVICE

Harley C. Ralston and Thomas D. Williams,
Cleveland, Ohio, assignors to The American
Steel and Wire Company of New Jersey, a cor-
poration of New Jersey

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3 Claims. (Cl. 294—106)

This invention is a device for handling an upright pile of substantially concentrically arranged coils, the object being to lift and carry such a pile without danger of its being dropped. A further object is to provide a device of this general character which is of a rigid construction. Other objects may be inferred.

Referring to the accompanying drawings:

Figure 1 is an elevation of the device.

Figure 2 is a longitudinal section of details at the top of the device.

Figure 3 is a cross-section from the line III—III in Figure 2.

Figure 4 is a longitudinal section on the line IV—IV of Figure 2.

More specifically, the device includes the combination of a frame 1, arms 2 pivotally depending from the frame 1 and having hooked lower ends 2^a, these arms being arranged so that they may encompass the pile 3 to be handled and so that their hooked ends may swing beneath the bottom coil in the same, a vertical reciprocative bar 4 arranged through the frame 1, a spider 5 secured to the bar 4 beneath the frame 1, links 6 interconnecting the spider 5 and the arms 2, whereby application of lifting force to the bar 4 forces the arms 2 together, and fixed arms 7 depending from the frame 1 and which are constructed and arranged to enter and steady at least one of the upper coils in the pile 3 when the hooked arms 2^a are beneath the bottom coil in the latter.

The links 6 each provide laterally spaced parts 6^a, and the fixed arms 7 depend through these parts and function to guide the same. Actually, the parts 6^a are each two links arranged parallel in spaced relationship to form a set, each set interconnecting one of the arms 2^a to the spider 5, and encompassing one of the arms 7. The portions of the depending arms 7 which parallel the movement of the spider 5 are spaced sufficiently apart to accommodate the latter, while their lower ends come closer together and have rounded ends to permit their easy entry within the coil or coils in the top of the pile 3.

The device also includes a latch 8 which functions to hold the arms 2 with their ends swung apart. This latch is released when the pile is to be engaged.

We claim:

1. A device for handling an upright pile of substantially concentrically arranged coils, including the combination of a frame, arms pivot-

ally depending from said frame and having hooked lower ends, said arms being arranged so that they may encompass said pile and so that their hooked ends may swing beneath the bottom coil in the same, a vertical reciprocative bar centrally arranged through said frame, a spider fixed to said bar beneath said frame, links interconnecting said spider and said arms, whereby application of lifting force to said bar forces said arms together, and fixed arms depending from said frame and which are constructed and arranged to enter and steady at least one of the upper coils in said pile when said hooked ends are beneath the bottom coil in the latter.

2. A device for handling an upright pile of substantially concentrically arranged coils, including the combination of a frame, arms pivotally depending from said frame and having hooked lower ends, said arms being arranged so that they may encompass said pile and so that their hooked ends may swing beneath the bottom coil in the same, a vertical reciprocative bar centrally arranged through said frame, a spider fixed to said bar beneath said frame, links interconnecting said spider and said arms, whereby application of lifting force to said bar forces said arms together, and fixed arms depending from said frame and which are constructed and arranged to enter and steady at least one of the upper coils in said pile when said hooked ends are beneath the bottom coil in the latter, said links each providing laterally spaced parallel parts and said fixed arms depending through said parts and functioning to guide the same.

3. A device for handling an upright pile of substantially concentrically arranged coils, including depending arms spaced to straddle said pile when said device is lowered thereover and having inwardly movable hooked lower ends pointing inwardly to engage the bottom of the bottom coil of said pile when said arms straddle the same and said lower ends are moved inwardly, said device including arms depending between the first named arms in such arrangement as to completely enter at least the top coil of said pile when said device is lowered onto the same to effect straddling thereof by the first named arms, said device also including means for inwardly moving and holding said hooked lower ends of the first named arms.

THOMAS D. WILLIAMS.
HARLEY C. RALSTON.