June 27, 1933. J. L. SKEEHAN 1,916,025

STRUCTURAL SHAPE TURNING MACHINE

Filed June 9, 1932 2 Sheets-Sheet 1

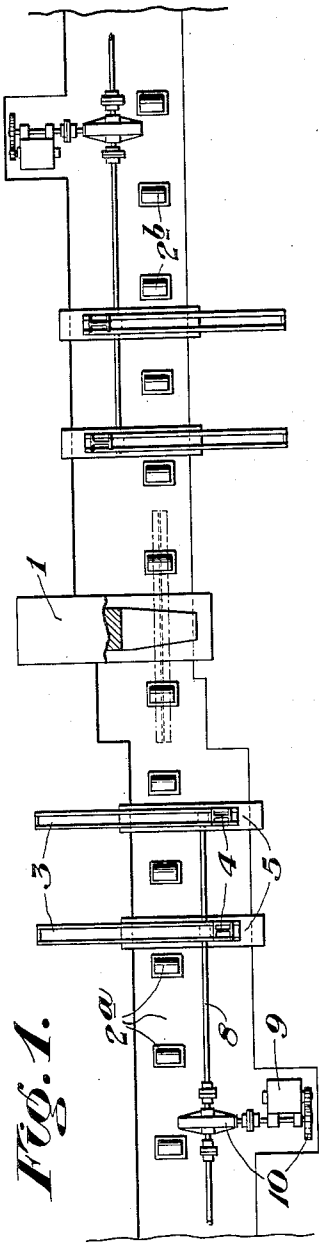


Fig. 1.

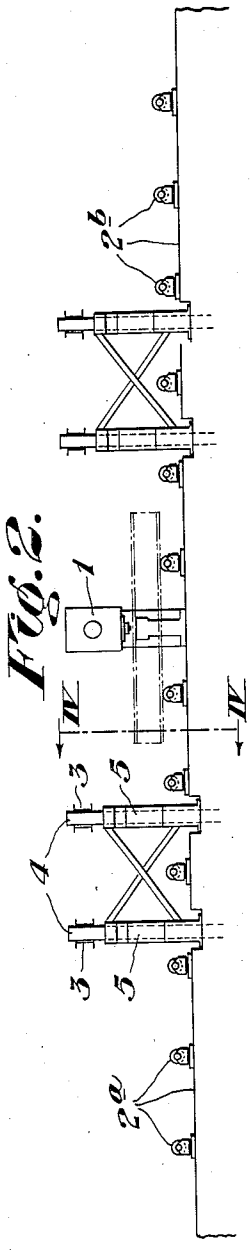


Fig. 2.

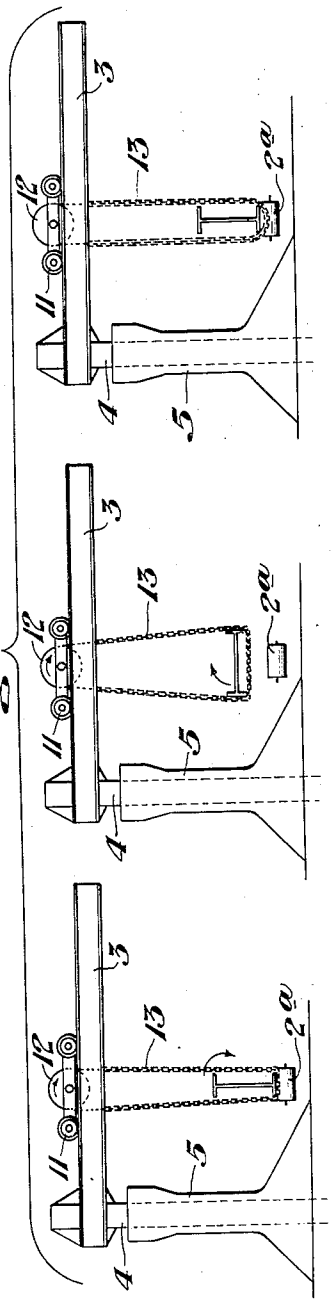


Fig. 3.

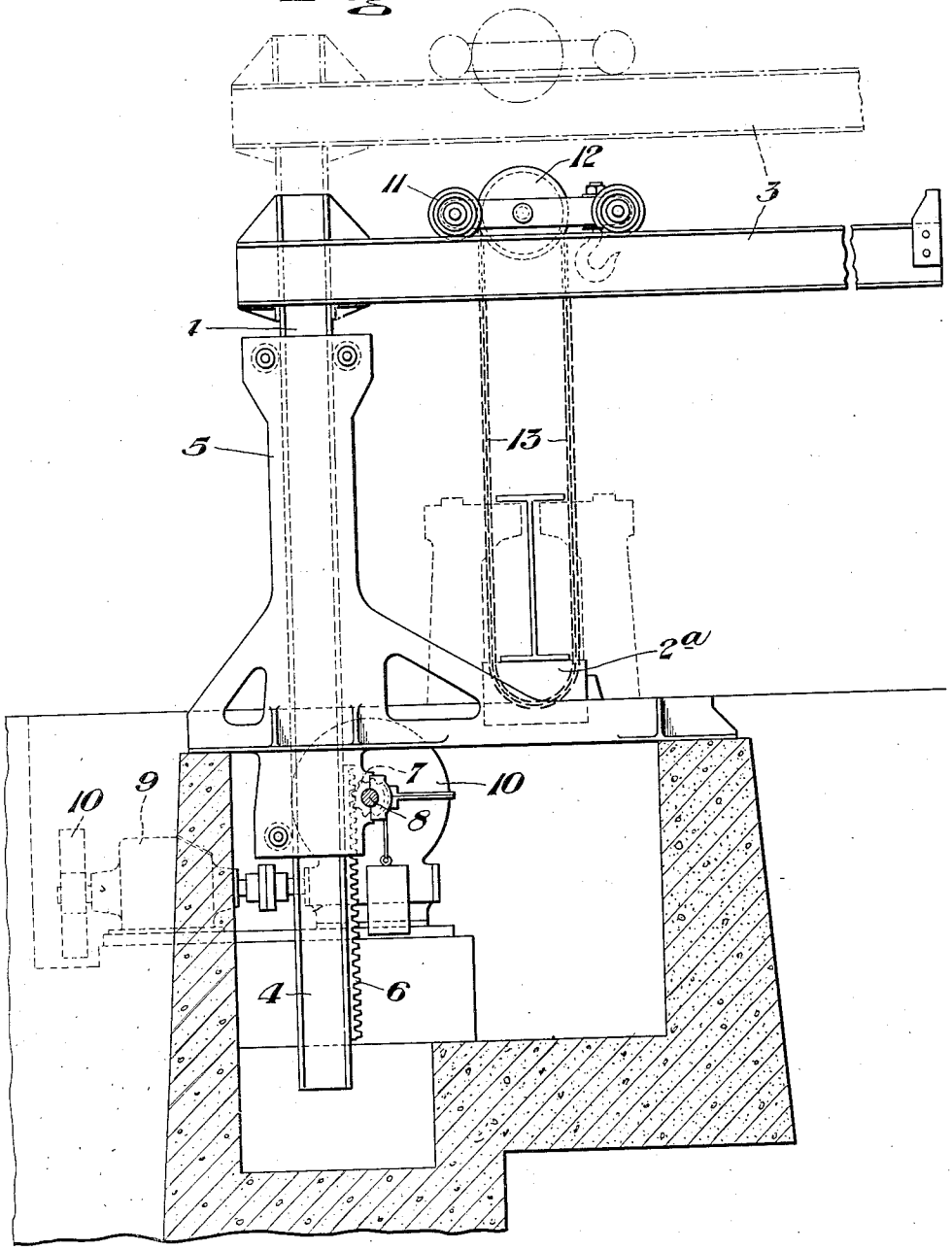
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his Attorneys.

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Fig. 4.



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Patented June 27, 1933

1,916,025

UNITED STATES PATENT OFFICE

JOHN L. SKEEHAN, OF BADEN, PENNSYLVANIA

STRUCTURAL SHAPE TURNING MACHINE

Application filed June 9, 1932. Serial No. 616,342.

This invention is a machine for turning heavy objects. It is particularly adapted to turn work carried by a conveyer or table. For instance, a structural steel beam flange punch generally has a roller table which carries the work through the punch in a horizontal flange position. After the top flange is punched the beam is rolled back, turned so its other flange is uppermost and re-passed through the punch. This turning operation is generally done manually or by skillful manipulation of a crane.

A specific example of the invention used for the above purpose will now be disclosed. Having reference to the accompanying drawings:

Figure 1 is a top plan of a beam punch and roller table to which the invention is applied.

Figure 2 is a side elevation of Figure 1.

Figure 3 is an end elevation of the invention in various stages of its operation, and

Figure 4 is a cross-section from the line IV—IV in Figure 2.

The above show a beam punch 1 provided with a roller table divided into two sections, an ingoing section 2^a and an outgoing section 2^b. Horizontal arms 3 are supported over and across the section 2^a by vertical masts 4 which slide in housings 5. The masts 4 extend below the floor level and there carry racks 6. Pinions 7 mounted on a common shaft 8 engage the racks 6 of each of the masts 4. This shaft is driven by a reversing motor 9 through suitable reduction gearing 10.

Carriages 11 run on the arms 3 and carry free running wheels 12. Depending endless chain loops 13 are carried by these wheels 12 which are of sufficient overall diameter to give the vertical sections of the loops sufficient spread so they may encompass and receive a beam on the table 2^a.

Assuming that a beam has had one of its flanges punched and is now ready to be run back to the table section 2^a for turning. Operation of the motor 9 lowers the masts 4 so that the chain loops 13 may receive the beam which is then rolled over the section 2^a of the roller table and through the two loops. The motor is now operated to lift the masts 4 so that the beam is raised from the roller table. It is now easy to roll the beam over so that its other flange will be uppermost. The motor then re-lowers the masts 4 so that the beam again rests on the roller table but with its unpunched flange uppermost. It may now be run through the punch so that its top flange can be punched and then onto the outgoing section 2^b of the roller table.

The drawings show only two of the units just described as this is sufficient to support most beam lengths at both ends. However, it is possible to use more than these, having them all alined. They may be then used together to handle longer beams or may function individually in pairs.

It might be mentioned that most of the operations here disclosed might be performed manually. The wheels on the carriages 11 may be easily made sufficiently free running to permit this. During the actual turning operation the beam will be balanced and the only forces necessary to overcome will be its inertia and the turning friction of the wheels 12.

Although a specific form of this invention has been shown and described in accordance with the patent statutes, it is not intended to limit its scope exactly thereto, except as defined by the following claim.

I claim:

A machine for turning heavy objects including a hoist having a horizontal lifting arm, a carriage running on said arm, a wheel on said carriage and a depending endless loop of chain or cable arranged on and over said wheel.

In testimony whereof, I have hereunto set my hand.

JOHN L. SKEEHAN.

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