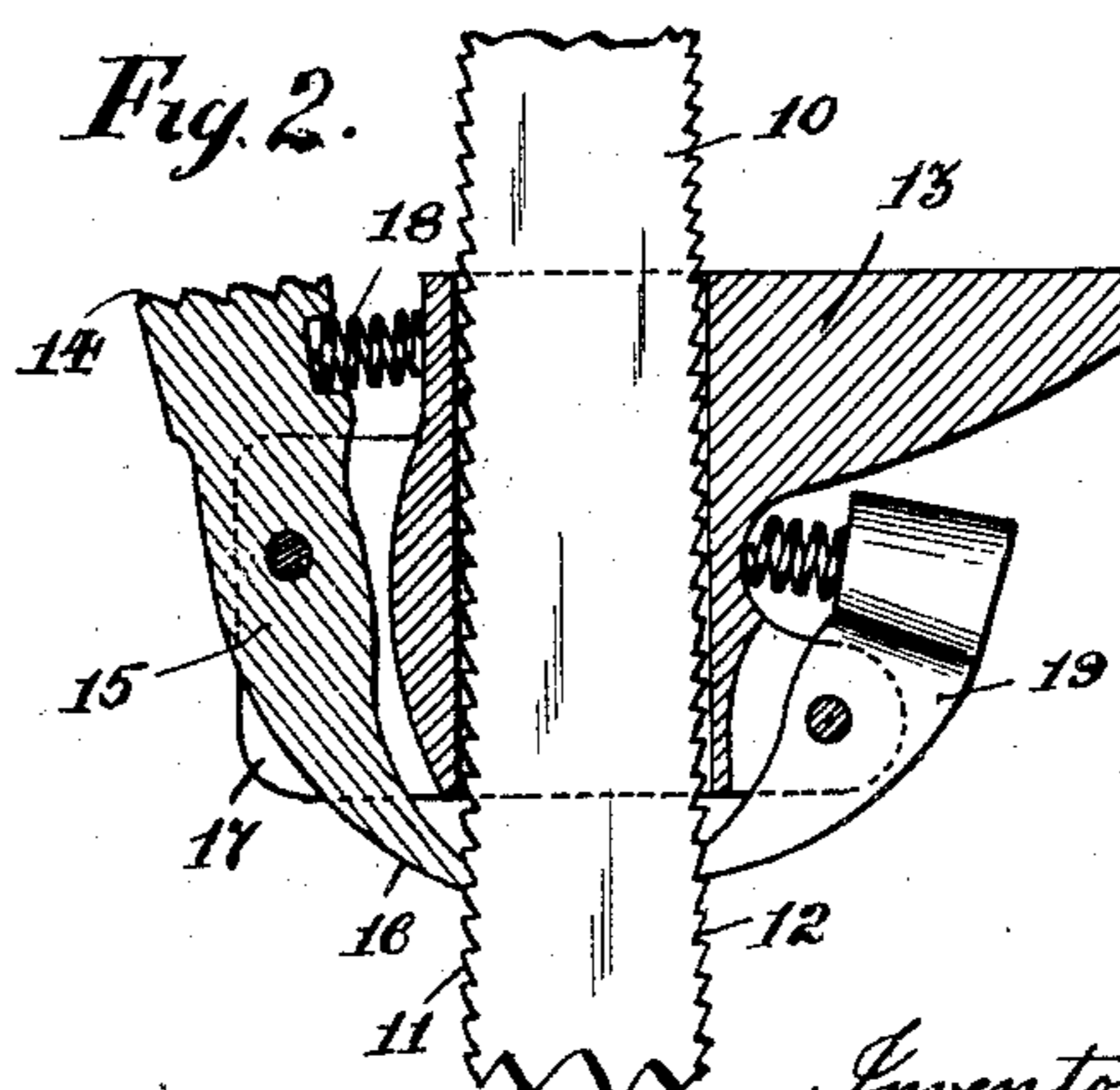
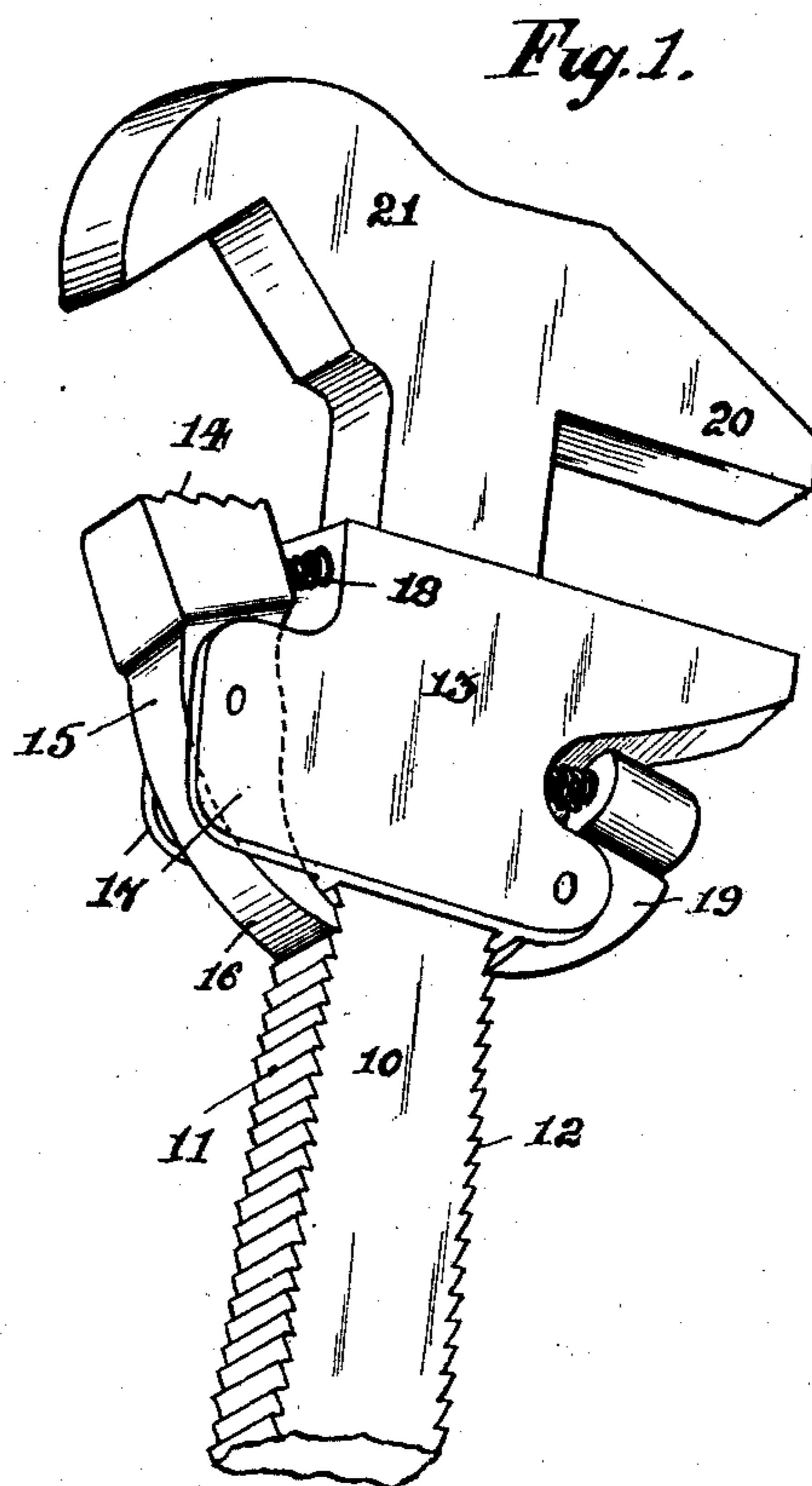


E. J. WASBROAD.
WRENCH.
APPLICATION FILED APR. 6, 1908.

905,610.

Patented Dec. 1, 1908.



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WRENCH.

No. 905,610.

Specification of Letters Patent.

Patented Dec. 1, 1908.

Application filed April 6, 1908. Serial No. 425,486.

To all whom it may concern:

Be it known that I, ERNEST JOSEPH WASBROAD, a subject of the King of Great Britain, residing at 173 Canning street, in the city and district of Montreal, in the Province of Quebec, in the Dominion of Canada, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

10 The invention relates to improvements in wrenches, as described in the present specification and illustrated by the accompanying drawings that form part of the same.

15 The invention consists essentially in the novel arrangement and construction of parts whereby the sliding grip member is held rigidly to its gripping position by a pivoted dog, spring-held therefrom.

20 The objects of the invention are to devise a wrench of very simple construction, easy to operate with one hand of the user if required, and to produce a tool of the class described at a very cheap cost and yet of a very durable nature.

25 Figure 1 is a perspective view of a wrench showing my invention applied to a form of double wrench. Fig. 2 is a sectional view of the sliding grip member showing a plan view of the arrangement of dogs and a portion of 30 the stem with the wrench.

Like numerals of reference indicate corresponding parts in each figure.

35 Referring to the drawings, 10 is the stem having the parallel rows of ratchet teeth 11 and 12 arranged on each side of said stem.

13 is a sliding grip member.

40 15 is a pawl having a corrugated head forming the pipe grip 14 and the toothed end 16 adapted to engage the ratchet teeth 11, said pawl 15 is pivoted in the ears 17 projecting from one side of the sliding grip member 13, said head or pipe grip 14 being spring-held from the body of the said sliding member 13 by the spiral spring 18. 19 is a dog or 45 pawl pivoted in suitable lugs projecting from the other side of the sliding member 13 and having its head spring held from the body of said sliding member between said lugs and a grip member integral with said sliding member and coacting with a permanent grip

member 20 projecting from the end of the stem 10.

21 is a permanent grip member projecting from the opposite side of the stem 10 from the permanent grip member 20 and formed 55 with an angular recess for gripping pipes.

The precise form of dog described and of the spring-held arrangement is not absolutely essential to the construction of this wrench, as there may be modifications of the 60 same without departing from the spirit of my invention, the salient features being the arrangement of a spring-held pivoted dog in the sliding grip member and the cutting of the ratchet teeth on the stem, so that the 65 said dog may act as a retaining pawl in the gripping position of the wrench members.

In the operation of the wrench, the sliding grip member is slid along the stem away from the outer grip member by pressing the 70 thumb on the heads of the spring-held dogs or pawls, thus releasing the said pawls from engagement with the teeth of the ratchet. An outer grip member is then placed in position on the work and the sliding grip member 75 slid up to the work, the thumb being removed from the dogs or pawls, for the teeth of the pawls will slide from tooth to tooth of the ratchets and as the grip prong of the sliding grip member tightens on the work, the 80 teeth of the dogs or pawls fall in place to their particular retaining teeth in the ratchets and the wrench is then handled in the usual manner, in removing the wrench from the work, the pawls are pressed in the 85 same way and the sliding member slid away from said work, the same operation being constantly repeated.

It will readily be seen that in this wrench, the work may be done very quickly, as in 90 handling the wrench, the workman will become very proficient in sliding inwardly and outwardly the said sliding grip member, thus rendering it quite unnecessary to take such long turns in the tightening of any nut or 95 bolt.

What I claim as my invention is:

In a wrench, a stem having corresponding ratchet teeth formed on opposite faces and rigid jaw members at the end thereof, a slid- 100

ing member mounted thereon, and pawls pivoted in said sliding member and spring-held at their heads from said member for engagement at their toothed ends coincidently with each of said toothed faces, one of said pawls forming a jaw member.

Signed at the city and district of Montreal,

in the Province of Quebec, in the Dominion of Canada, this 17th day of March, 1908.

ERNEST JOSEPH WASBROAD.

Witnesses:

G. H. TRESIDDER,
HARRY DAVIS.