

MOTOR DRIVE UNIT

The Motor Drive Unit as shown in figures 2 and 3 is operated by a 1/70 h.p. motor connected to a shaft and ratchet thru a fiber coupling, worm and spiral gear. The drive gear assembly is directly engaged with the card feed rack as shown at "B" Fig. 2.

When the trip magnet is energized, its armature is attracted and the armature bracket assembly "G" Fig. 2 operates against the kickover pawl pin on the kickover pawl, overthrowing the entire assembly, allowing the driving pawl "B" to engage with its ratchet "D" Fig. 1. At the time the kickover pawl assembly operates, the lower points of the latch contact "D" Fig. 3, are latched closed, completing the motor circuit until the end of the feeding cycle. During the feed cycle, the upper points of the latch contact are open, breaking the punch magnet, brush magnet, and duplicating circuits.

When the motor rotates, the entire pawl support and drive gear assembly Fig. 1, revolves, moving the card feed rack to the left, feeding a card into position to be punched in column one. The drive gear assembly is so timed with the card feed rack that as the rack reaches the end of its feeding stroke, the drive and kickover pawls operate against the stop bracket "G" Fig. 1, disengaging the drive pawl from the ratchet.

The pawl support drive gear assembly and card feed rack are returned to their normal position by the card feed rack return spring assembly "E" Fig. 3.

Should any obstruction stop the card feed rack during its feed cycle, the drive gear assembly will be stopped, the ratchet will drive the pawl support against the tension of the safety trip springs "K" Fig. 3 until the drive and kickover pawls operate against the safety trip pin "R" Fig. 1, disengaging the drive pawl from the ratchet.

The complete motor drive unit assembly can be very readily removed from the machine by taking out the six mounting screws. Care should be exercised when replacing the unit to see that the knife switch connectors "G" Fig. 3, are not damaged, also that the drive gear assembly is properly timed with the card feed rack as shown at "B" Fig. 2.

ADJUSTMENTS

Timing of Motor Drive Unit to Machine—Spot marks are provided on the drive gear and the card feed rack "B" Fig. 2, to show where the rack and gear should be meshed when installing the motor drive unit.

Trip Magnet Armature Bracket Assembly ("G" Fig. 2)—With the card feed rack to the extreme right, adjust the trip magnet armature bracket assembly by means of four screws (two in each end of armature), so that when the armature is attracted and rests squarely against the cores, there will be a clearance of 1/32" between the bracket arm and kickover pawl pin, (when kickover arm assembly "L" is resting against its stop), as shown in Fig. 1.

Magnet Armature Stop Screw ("M" Fig. 3)—Adjust so there will be approximately 3/16" clearance between the armature bracket and kickover pawl pin, when armature is in de-energized position and kickover and driving pawl are dis-engaged from ratchet as shown in Fig. 2.

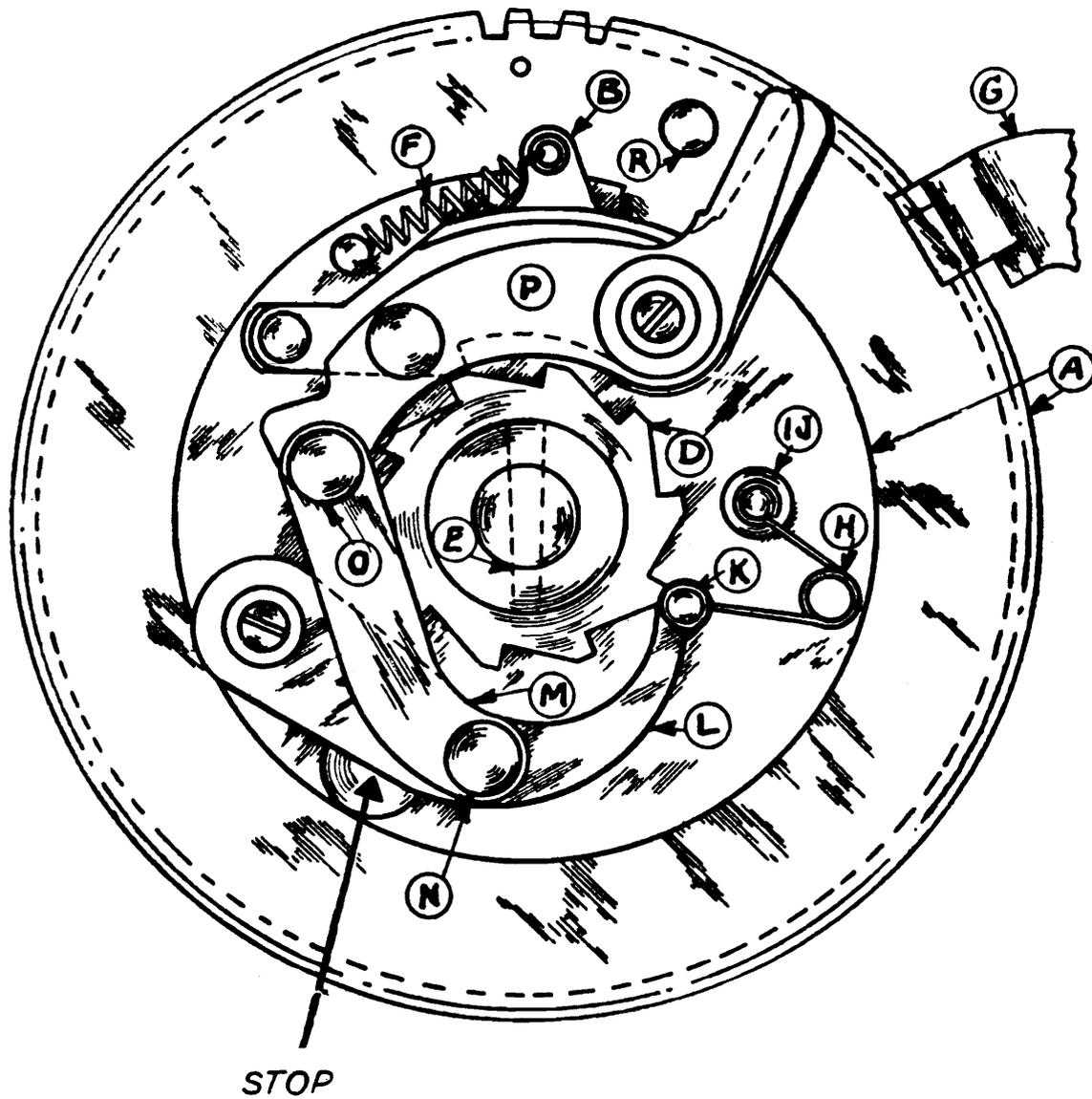
Contact Latch Assembly ("P" Fig. 3)—With the trip magnet armature in attracted position, the contact operating arm should carry the center strap of contact 1/32" to 1/16" past latching point of latch assembly "P" Fig. 3. With center strap of contact latched and armature against its backstop, the lower strap of contact should have sufficient rise off its support to insure good contact and approximately 3/32" air gap between its upper points.

With armature against its backstop and center strap of contact unlatched, it should rest against the operating arm, and the upper strap should have sufficient rise off brass support to insure good contact and approximately 3/32" between lower points. (Fig. 3)

Driving Pawl Stop Bracket ("G" Fig. 1)—Adjust stop bracket with the driving pawl dis-engaged from the ratchet so there will be from 1/16" to 1/32" clearance between face of driving pawl and stop bracket, when the card feed rack is at the limit of its travel to the left.

Contact Latch Trip ("H" Fig. 3)—This is attached to the rear side of the drive gear and should be adjusted so it unlatches the center strap of contact

PAWL SUPPORT & DRIVE GEAR ASSEMBLY COMPLETE #21668



A	SUPPORT & GEAR ASSEMBLY	20,201
B	PAWL ASSEMBLY	20107
C	KICKOVER PAWL ASSEMBLY (K,L,M,N,O,P)	21883
D	RATCHET	17,609
E	" PIN	3,916
F	PAWL SPRING	20,321
G	STOP BRACKET	20,193
H	KICKOVER SPRING	102,465
I	" " PIN "REWORK"	102,468
J	" " PIN "LONG"	102,467
K	" " PIN "SHORT"	102,466
L	" " ARM ASSEMBLY	21,875
M	" " LINK	21,721
N	" LINK RIVET "SHORT"	21,814
O	" " " "LONG"	21,815
P	" PAWL ASSEMBLY	20,194
R	SAFETY TRIP PIN	17,628

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Fig. 1

A	CARD FEED GEAR HOUSING	17,661	E	CARD FEED RACK ASSEMBLY	18,719
B	" " " ASSEMBLY	10,859	F	TRIP MAGNET ARMATURE SHAFT	17,615
C	" " RACK GUARD-LEFT	18,533	G	" " " BRACKET ASSEMBLY	18,721
D	" " " " -RIGHT	17,659	H	RETURN SPRING BRACKET	20,007

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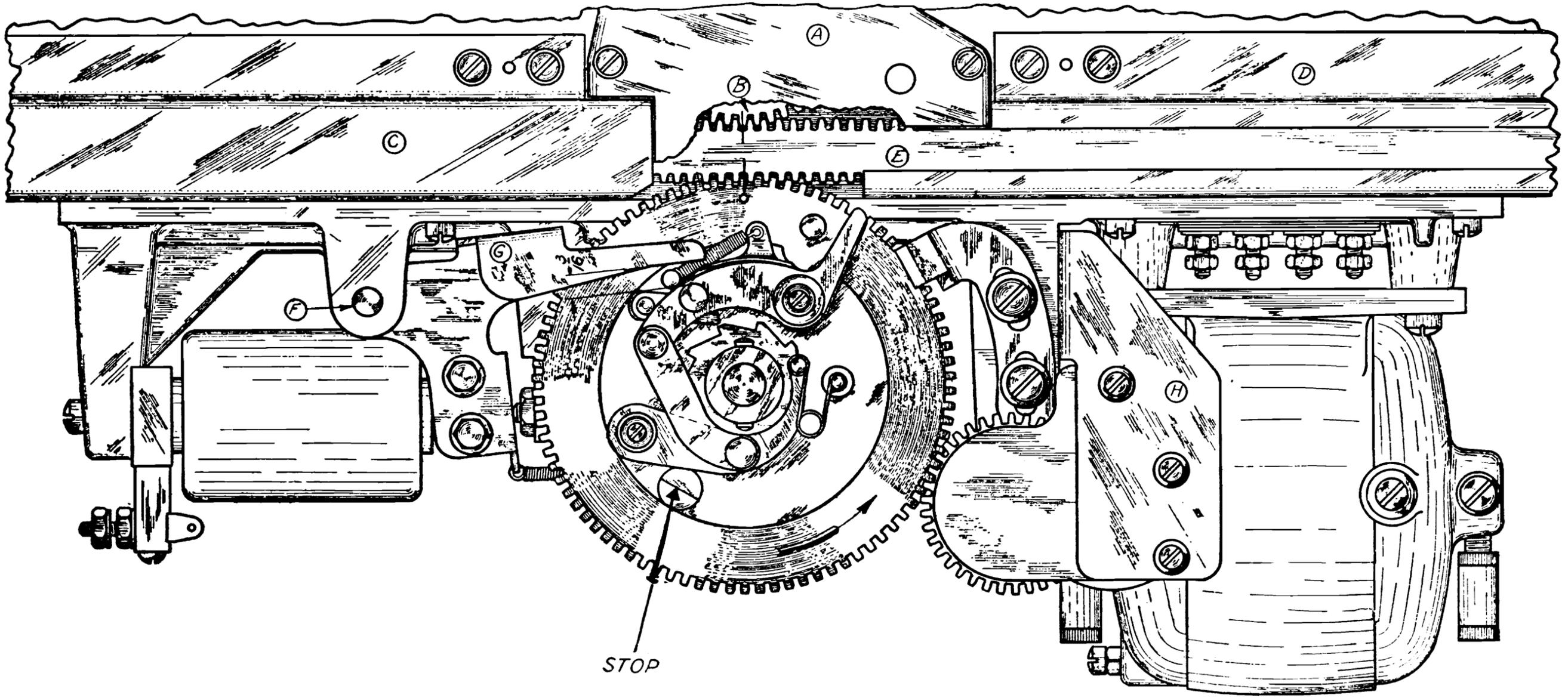
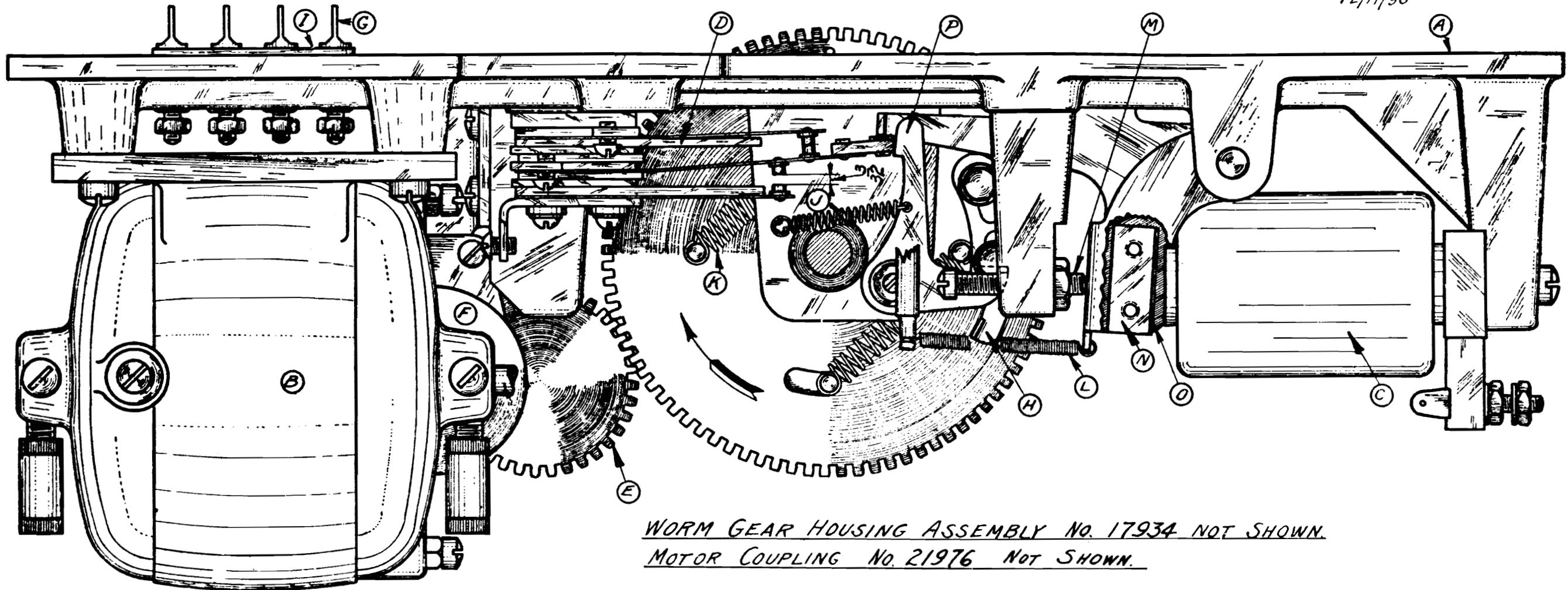


Fig. 2

MOTOR DRIVE UNIT COMPLETE ASSEMBLY No. 19095

A	MOUNTING PLATE ASSEMBLY	18,714	I	CONNECTING SWITCH INSULATION STRIP	14,868
B	DRIVE MOTOR	102,299	J	CONTACT LATCH SPRING	3,000
C	TRIP MAGNET ASSEMBLY	18,722	K	SAFETY TRIP SPRING	19,233
D	LATCH CONTACT	17,941	L	MAGNET ARMATURE SPRING	13,507
E	RETURN SPRING	21,543	M	" " STOP SCREW	18,865
F	GOVERNOR	11,456	N	" ARMATURE	17,611
G	CONNECTING SWITCH	14,873	O	" " LINER	17,614
H	CONTACT LATCH TRIP	17,641	P	CONTACT LATCH ASSEMBLY	18,724

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WORM GEAR HOUSING ASSEMBLY No. 17934 NOT SHOWN.
MOTOR COUPLING No. 21976 NOT SHOWN.

Fig. 3

1/16" before driving pawl and kickover pawl operate against the stop bracket to dis-engage driving pawl.

Card Feed Rack Spring—This should be installed with one turn tension with the card feed rack in its normal position, to extreme right. This spring is identified by the blue loop.

The governor is the same as used on the standard duplicator with the exception that the governor plate has been relieved on one side to facilitate adjustment of the stop bracket.

Latch Contact Assembly (Upper and Lower "D" Fig. 3)—The lower strap is latched closed when the trip magnet armature is attracted, and should have sufficient tension to insure good contact when latched. When normally unlatched and the upper points are closed, the lower points should have 3/32" air gap.

The upper contact should have 3/32" air gap when lower points are latched closed and have sufficient tension to insure good contact when closed.